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<b>(54) Title:</b> NOVEL HUMAN GENES AND GENE EXPRESSION PRODUCTS		
<b>(57) Abstract</b> <p>This invention relates to novel human genes, to proteins expressed by the genes, and to variants of the proteins. The invention also relates to diagnostic assays and therapeutic agents related to the genes and proteins, including probes, antisense constructs, and antibodies. The subject nucleic acids have been found to be differentially regulated in tumor cells, particularly colon cancer cell lines and/or tissue.</p> <div style="text-align: right; margin-top: 20px;"> <b>Differential Expression Analysis</b> </div> <div style="text-align: right; margin-top: 10px;"> <b>SW480 Clone Number</b>          1 2 3 4 5       </div> <div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 10px;"> <div style="width: 30%;"> <b>Cancer Probe</b> </div> <div style="width: 60%;">  </div> </div> <div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 10px;"> <div style="width: 30%;"> <b>Normal Probe</b> </div> <div style="width: 60%;">  </div> </div>		

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5        **NOVEL HUMAN GENES AND GENE EXPRESSION PRODUCTS**

      This application is based on Provisional Application No. 60/088,801, filed June 10, 1998, which is hereby incorporated herein by reference.

10                                **Field of the Invention**

      The present invention provides nucleic acid sequences and proteins encoded thereby, as well as probes derived from the nucleic acid sequences, antibodies directed to the encoded proteins, and diagnostic methods for detecting cancerous cells, especially colon cancer cells.

15                                **Background of the Invention**

      Colorectal carcinoma is a malignant neoplastic disease. There is a high incidence of colorectal carcinoma in the Western world, particularly in the United States. Tumors of this type often metastasize through lymphatic and vascular  
20 channels. Many patients with colorectal carcinoma eventually die from this disease. In fact, it is estimated that 62,000 persons in the United States alone die of colorectal carcinoma annually.

      However, if diagnosed early, colon cancer may be treated effectively by surgical removal of the cancerous tissue. Colorectal cancers originate in the colorectal  
25 epithelium and typically are not extensively vascularized (and therefore not invasive) during the early stages of development. Colorectal cancer is thought to result from the clonal expansion of a single mutant cell in the epithelial lining of the colon or rectum. The transition to a highly vascularized, invasive and ultimately metastatic cancer which spreads throughout the body commonly takes ten years or longer. If the cancer  
30 is detected prior to invasion, surgical removal of the cancerous tissue is an effective cure. However, colorectal cancer is often detected only upon manifestation of clinical symptoms, such as pain and black tarry stool. Generally, such symptoms are present

only when the disease is well established, often after metastasis has occurred, and the prognosis for the patient is poor, even after surgical resection of the cancerous tissue. Early detection of colorectal cancer therefore is important in that detection may significantly reduce its morbidity.

5 Invasive diagnostic methods such as endoscopic examination allow for direct visual identification, removal, and biopsy of potentially cancerous growths such as polyps. Endoscopy is expensive, uncomfortable, inherently risky, and therefore not a practical tool for screening populations to identify those with colorectal cancer. Non-invasive analysis of stool samples for characteristics indicative of the presence of colorectal cancer or precancer is a preferred alternative for early diagnosis, but no known diagnostic method is available which reliably achieves this goal. A reliable, non-invasive, and accurate technique for diagnosing colon cancer at an early stage would help save many lives.

**Summary of the Invention**

The present invention provides nucleic acid sequences and proteins encoded thereby, as well as probes derived from the nucleic acid sequences, antibodies directed to the encoded proteins, and diagnostic methods for detecting cancerous cells, especially colon cancer cells.

In one aspect, the invention provides an isolated nucleic acid comprising a nucleotide sequence which hybridizes under stringent conditions to a sequence of SEQ ID Nos. 1-127 or a sequence complementary thereto. In a related embodiment, the nucleic acid is at least about 80% or about 100% identical to a sequence corresponding to at least about 12, at least about 15, at least about 25, or at least about 40 consecutive nucleotides up to the full length of one of SEQ ID Nos. 1-127 or a sequence complementary thereto or up to the full length of the gene of which said sequence is a fragment. In certain embodiments, a nucleic acid of the present invention includes at least about five, at least about ten, or at least about twenty nucleic acids from a region designated as novel in Table 2. In certain other embodiments, a nucleic acid of the present invention includes at least about five, at least about ten, or at least about twenty nucleotides which are not included in corresponding clones whose accession numbers are listed in Table 2.

In one embodiment, the invention provides a nucleic acid comprising a nucleotide sequence which hybridizes under stringent conditions to a sequence of SEQ ID Nos. 1-127 or a sequence complementary thereto, and a transcriptional regulatory sequence operably linked to the nucleotide sequence to render the nucleotide sequence suitable for use as an expression vector. In another embodiment, the nucleic acid may be included in an expression vector capable of replicating in a prokaryotic or eukaryotic cell. In a related embodiment, the invention provides a host cell transfected with the expression vector.

In another embodiment, the invention provides a transgenic animal having a transgene of a nucleic acid comprising a nucleotide sequence which hybridizes under stringent conditions to a sequence of SEQ ID Nos. 1-127 or a sequence complementary thereto incorporated in cells thereof. The transgene modifies the level of expression of the nucleic acid, the stability of an mRNA transcript of the nucleic acid, or the activity of the encoded product of the nucleic acid.

In yet another embodiment, the invention provides substantially pure nucleic acid which hybridizes under stringent conditions to a nucleic acid probe corresponding to at least about 12, at least about 15, at least about 25, or at least about 40 consecutive nucleotides up to the full length of one of SEQ ID Nos. 1-127 or a sequence complementary thereto or up to the full length of the gene of which said sequence is a fragment. The invention also provides an antisense oligonucleotide analog which hybridizes under stringent conditions to at least 12, at least 25, or at least 50 consecutive nucleotides of one of SEQ ID Nos. 1-850 up to the full length of one of SEQ ID Nos. 1-850 or a sequence complementary thereto or up to the full length of the gene of which said sequence is a fragment, and which is resistant to cleavage by a nuclease, preferably an endogenous endonuclease or exonuclease.

In another embodiment, the invention provides a probe/primer comprising a substantially purified oligonucleotide, said oligonucleotide containing a region of nucleotide sequence which hybridizes under stringent conditions to at least about 12, at least about 15, at least about 25, or at least about 40 consecutive nucleotides of sense or antisense sequence selected from SEQ ID Nos. 1-127 up to the full length of one of SEQ ID Nos. 1-127 or a sequence complementary thereto or up to the full length of the gene of which said sequence is a fragment. In preferred embodiments,

the probe selectively hybridizes with a target nucleic acid. In another embodiment, the probe may include a label group attached thereto and able to be detected. The label group may be selected from radioisotopes, fluorescent compounds, enzymes, and enzyme co-factors. The invention further provides arrays of at least about 10, at least about 25, at least about 50, or at least about 100 different probes as described above attached to a solid support.

In yet another embodiment, the invention pertains to a method of determining the phenotype of a cell, comprising detecting the differential expression, relative to a normal cell, of at least one nucleic acid which hybridizes under stringent conditions to one of SEQ ID Nos. 1-850, wherein the nucleic acid is differentially expressed by at least a factor of two, at least a factor of five, at least a factor of twenty, or at least a factor of fifty.

In another aspect, the invention provides polypeptides encoded by the subject nucleic acids. In one embodiment, the invention pertains to a polypeptide including an amino acid sequence encoded by a nucleic acid comprising a nucleotide sequence which hybridizes under stringent conditions to a sequence of SEQ ID Nos. 1-127 or a sequence complementary thereto, or a fragment comprising at least about 25, or at least about 40 amino acids thereof. Further provided are antibodies immunoreactive with these polypeptides.

In still another aspect, the invention provides diagnostic methods. In one embodiment, the invention pertains to a method for determining the phenotype of cells from a patient by providing a nucleic acid probe comprising a nucleotide sequence having at least 12, at least about 15, at least about 25, or at least about 40 consecutive nucleotides represented in a sequence of SEQ ID Nos. 1-850 up to the full length of one of SEQ ID Nos. 1-850 or a sequence complementary thereto or up to the full length of the gene of which said sequence is a fragment, obtaining a sample of cells from a patient, providing a second sample of cells substantially all of which are non-cancerous, contacting the nucleic acid probe under stringent conditions with mRNA of each of said first and second cell samples, and comparing (a) the amount of hybridization of the probe with mRNA of the first cell sample, with (b) the amount of hybridization of the probe with mRNA of the second cell sample, wherein a difference of at least a factor of two, at least a factor of five, at least a factor of twenty, or at least

a factor of fifty in the amount of hybridization with the mRNA of the first cell sample as compared to the amount of hybridization with the mRNA of the second cell sample is indicative of the phenotype of cells in the first cell sample. Determining the phenotype includes determining the genotype, as the term is used herein.

5           In another embodiment, the invention provides a test kit for identifying an transformed cells, comprising a probe/primer as described above, for measuring a level of a nucleic acid which hybridizes under stringent conditions to a nucleic acid of SEQ ID Nos. 1-850 in a sample of cells isolated from a patient. In certain  
10           embodiments, the kit may further include instructions for using the kit, solutions for suspending or fixing the cells, detectable tags or labels, solutions for rendering a nucleic acid susceptible to hybridization, solutions for lysing cells, or solutions for the purification of nucleic acids.

          In another embodiment, the invention provides a method of determining the phenotype of a cell, comprising detecting the differential expression, relative to a  
15           normal cell, of at least one protein encoded by a nucleic acid which hybridizes under stringent conditions to one of SEQ ID Nos. 1-850, wherein the protein is differentially expressed by at least a factor of two, at least a factor of five, at least a factor of twenty, or at least a factor of fifty. In one embodiment, the level of the protein is detected in an immunoassay. The invention also pertains to a method for determining the  
20           presence or absence of a nucleic acid which hybridizes under stringent conditions to one of SEQ ID Nos. 1-127 in a cell, comprising contacting the cell with a probe as described above. The invention further provides a method for determining the presence or absence of a subject polypeptide encoded by a nucleic acid which hybridizes under stringent conditions to one of SEQ ID Nos. 1-127 in a cell,  
25           comprising contacting the cell with an antibody as described above. In yet another embodiment, the invention provides a method for determining the presence of an aberrant mutation (e.g., deletion, insertion, or substitution of nucleic acids) or aberrant methylation in a gene which hybridizes under stringent conditions to a sequence of SEQ ID Nos. 1-383 or a sequence complementary thereto, comprising collecting a  
30           sample of cells from a patient, isolating nucleic acid from the cells of the sample, contacting the nucleic acid sample with one or more primers which specifically hybridize to a nucleic acid sequence of SEQ ID Nos. 1-850 under conditions such that

hybridization and amplification of the nucleic acid occurs, and comparing the presence, absence, or size of an amplification product to the amplification product of a normal cell.

In one embodiment, the invention provides a test kit for identifying  
5 transformed cells, comprising an antibody specific for a protein encoded by a nucleic acid which hybridizes under stringent conditions to any one of SEQ Nos. 1-850. In certain embodiments, the kit further includes instructions for using the kit. In certain embodiments, the kit may further include instructions for using the kit, solutions for suspending or fixing the cells, detectable tags or labels, solutions for rendering a  
10 polypeptide susceptible to the binding of an antibody, solutions for lysing cells, or solutions for the purification of polypeptides.

In yet another aspect, the invention provides pharmaceutical compositions including the subject nucleic acids. In one embodiment, an agent which alters the level of expression in a cell of a nucleic acid which hybridizes under stringent  
15 conditions to one of SEQ ID Nos. 1-850 or a sequence complementary thereto is identified by providing a cell, treating the cell with a test agent, determining the level of expression in the cell of a nucleic acid which hybridizes under stringent conditions to one of SEQ ID Nos. 1-850 or a sequence complementary thereto, and comparing the level of expression of the nucleic acid in the treated cell with the level of  
20 expression of the nucleic acid in an untreated cell, wherein a change in the level of expression of the nucleic acid in the treated cell relative to the level of expression of the nucleic acid in the untreated cell is indicative of an agent which alters the level of expression of the nucleic acid in a cell. The invention further provides a pharmaceutical composition comprising an agent identified by this method. In another  
25 embodiment, the invention provides a pharmaceutical composition which includes a polypeptide encoded by a nucleic acid having a nucleotide sequence that hybridizes under stringent conditions to one of SEQ ID Nos. 1-850 or a sequence complementary thereto. In one embodiment, the invention pertains to a pharmaceutical composition comprising a nucleic acid including a sequence which hybridizes under stringent  
30 conditions to one of SEQ ID Nos. 1-850 or a sequence complementary thereto.

### Brief Description of the Figure

The figure depicts an exemplary assay result for determining differential expression of gene products in cells.

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### Detailed Description of the Invention

The invention relates to nucleic acids having the disclosed nucleotide sequences (SEQ ID Nos. 1-850), as well as full length cDNA, mRNA, and genes corresponding to these sequences, and to polypeptides and proteins encoded by these nucleic acids and genes and portions thereof.

10

Also included are nucleic acids that encode polypeptides and proteins encoded by the nucleic acids of SEQ ID Nos. 1-850. The various nucleic acids that can encode these polypeptides and proteins differ because of the degeneracy of the genetic code, in that most amino acids are encoded by more than one triplet codon. The identity of such codons is well known in this art, and this information can be used for the

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construction of the nucleic acids within the scope of the invention.

Nucleic acids encoding polypeptides and proteins that are variants of the polypeptides and proteins encoded by the nucleic acids and related cDNA and genes are also within the scope of the invention. The variants differ from wild-type protein in having one or more amino acid substitutions that either enhance, add, or diminish a biological activity of the wild-type protein. Once the amino acid change is selected, a nucleic acid encoding that variant is constructed according to the invention.

20

The following detailed description discloses how to obtain or make full-length cDNA and human genes corresponding to the nucleic acids, how to express these nucleic acids and genes, how to identify structural motifs of the genes, how to identify the function of a protein encoded by a gene corresponding to an nucleic acid, how to use nucleic acids as probes in mapping and in tissue profiling, how to use the corresponding polypeptides and proteins to raise antibodies, and how to use the nucleic acids, polypeptides, and proteins for therapeutic and diagnostic purposes.

25

The sequences investigated herein have been found to be differentially expressed in samples obtained from colon cancer cell lines and/or colon cancer tissue. However, it is also believed that these sequences may also have utility with other types of cancer.

30

Accordingly, certain aspects of the present invention relate to nucleic acids differentially expressed in tumor tissue, especially colon cancer cell lines, polypeptides encoded by such nucleic acids, and antibodies immunoreactive with these polypeptides, and preparations of such compositions. Moreover, the present invention provides diagnostic and therapeutic assays and reagents for detecting and treating disorders involving, for example, aberrant expression of the subject nucleic acids.

I. General

This invention relates in part to novel methods for identifying and/or classifying cancerous cells present in a human tumors, particularly in solid tumors, e.g., carcinomas and sarcomas, such as, for example, breast or colon cancers. The method uses genes that are differentially expressed in cancer cell lines and/or cancer tissue compared with related normal cells, such as normal colon cells, and thereby identifies or classifies tumor cells by the upregulation and/or downregulation of expression of particular genes, an event which is implicated in tumorigenesis.

Upregulation or increased expression of certain genes such as oncogenes, act to promote malignant growth. Downregulation or decreased expression of genes such as tumor suppressor genes promotes malignant growth. Thus, alteration in the expression of either type of gene is a potential diagnostic indicator for determining whether a subject is at risk of developing or has cancer, e.g., colon cancer.

Accordingly, in one aspect, the invention also provides biomarkers, such as nucleic acid markers, for human tumor cells, e.g., for colon cancer cells. The invention also provides proteins encoded by these nucleic acid markers.

The invention also features methods for identifying drugs useful for treatment of such cancer cells, and for treatment of a cancerous condition, such as colon cancer. Unlike prior methods, the invention provides a means for identifying cancer cells at an early stage of development, so that premalignant cells can be identified prior to their spreading throughout the human body. This allows early detection of potentially cancerous conditions, and treatment of those cancerous conditions prior to spread of the cancerous cells throughout the body, or prior to development of an irreversible cancerous condition.



## II. Definitions

For convenience, the meaning of certain terms and phrases used in the specification, examples, and appended claims, are provided below.

5       The term "an aberrant expression", as applied to a nucleic acid of the present invention, refers to level of expression of that nucleic acid which differs from the level of expression of that nucleic acid in healthy tissue, or which differs from the activity of the polypeptide present in a healthy subject. An activity of a polypeptide can be aberrant because it is stronger than the activity of its native counterpart. Alternatively,  
10       an activity can be aberrant because it is weaker or absent relative to the activity of its native counterpart. An aberrant activity can also be a change in the activity; for example, an aberrant polypeptide can interact with a different target peptide. A cell can have an aberrant expression level of a gene due to overexpression or underexpression of that gene.

15       The term "agonist", as used herein, is meant to refer to an agent that mimics or upregulates (e.g., potentiates or supplements) the bioactivity of a protein. An agonist can be a wild-type protein or derivative thereof having at least one bioactivity of the wild-type protein. An agonist can also be a compound that upregulates expression of a gene or which increases at least one bioactivity of a protein. An agonist can also be  
20       a compound which increases the interaction of a polypeptide with another molecule, e.g., a target peptide or nucleic acid.

      The term "allele", which is used interchangeably herein with "allelic variant", refers to alternative forms of a gene or portions thereof. Alleles occupy the same locus or position on homologous chromosomes. When a subject has two identical  
25       alleles of a gene, the subject is said to be homozygous for that gene or allele. When a subject has two different alleles of a gene, the subject is said to be heterozygous for the gene. Alleles of a specific gene can differ from each other in a single nucleotide, or several nucleotides, and can include substitutions, deletions, and/or insertions of nucleotides. An allele of a gene can also be a form of a gene containing mutations.

30       The term "allelic variant of a polymorphic region of a gene" refers to a region of a gene having one of several nucleotide sequences found in that region of the gene in other individuals.

“Antagonist” as used herein is meant to refer to an agent that downregulates (e.g., suppresses or inhibits) at least one bioactivity of a protein. An antagonist can be a compound which inhibits or decreases the interaction between a protein and another molecule, e.g., a target peptide or enzyme substrate. An antagonist can also be a compound that downregulates expression of a gene or which reduces the amount of expressed protein present.

The term “antibody” as used herein is intended to include whole antibodies, e.g., of any isotype (IgG, IgA, IgM, IgE, etc), and includes fragments thereof which are also specifically reactive with a vertebrate, e.g., mammalian, protein. Antibodies can be fragmented using conventional techniques and the fragments screened for utility in the same manner as described above for whole antibodies. Thus, the term includes segments of proteolytically-cleaved or recombinantly-prepared portions of an antibody molecule that are capable of selectively reacting with a certain protein. Nonlimiting examples of such proteolytic and/or recombinant fragments include Fab, F(ab')<sub>2</sub>, Fab', Fv, and single chain antibodies (scFv) containing a V[L] and/or V[H] domain joined by a peptide linker. The scFv's may be covalently or non-covalently linked to form antibodies having two or more binding sites. The subject invention includes polyclonal, monoclonal, or other purified preparations of antibodies and recombinant antibodies.

The phenomenon of “apoptosis” is well known, and can be described as a programmed death of cells. As is known, apoptosis is contrasted with “necrosis”, a phenomenon when cells die as a result of being killed by a toxic material, or other external effect. Apoptosis involves chromatic condensation, membrane blebbing, and fragmentation of DNA, all of which are generally visible upon microscopic examination.

A disease, disorder, or condition “associated with” or “characterized by” an aberrant expression of a nucleic acid refers to a disease, disorder, or condition in a subject which is caused by, contributed to by, or causative of an aberrant level of expression of a nucleic acid.

As used herein the term “bioactive fragment of a polypeptide” refers to a fragment of a full-length polypeptide, wherein the fragment specifically agonizes (mimics) or antagonizes (inhibits) the activity of a wild-type polypeptide. The

bioactive fragment preferably is a fragment capable of interacting with at least one other molecule, e.g., protein, small molecule, or DNA, which a full length protein can bind.

"Biological activity" or "bioactivity" or "activity" or "biological function", which are used interchangeably, herein mean an effector or antigenic function that is directly or indirectly performed by a polypeptide (whether in its native or denatured conformation), or by any subsequence thereof. Biological activities include binding to polypeptides, binding to other proteins or molecules, activity as a DNA binding protein, as a transcription regulator, ability to bind damaged DNA, etc. A bioactivity can be modulated by directly affecting the subject polypeptide. Alternatively, a bioactivity can be altered by modulating the level of the polypeptide, such as by modulating expression of the corresponding gene.

The term "biomarker" refers a biological molecule, e.g., a nucleic acid, peptide, hormone, etc., whose presence or concentration can be detected and correlated with a known condition, such as a disease state.

"Cells," "host cells", or "recombinant host cells" are terms used interchangeably herein. It is understood that such terms refer not only to the particular subject cell but to the progeny or potential progeny of such a cell. Because certain modifications may occur in succeeding generations due to either mutation or environmental influences, such progeny may not, in fact, be identical to the parent cell, but are still included within the scope of the term as used herein.

A "chimeric polypeptide" or "fusion polypeptide" is a fusion of a first amino acid sequence encoding one of the subject polypeptides with a second amino acid sequence defining a domain (e.g., polypeptide portion) foreign to and not substantially homologous with any domain of the subject polypeptide. A chimeric polypeptide may present a foreign domain which is found (albeit in a different polypeptide) in an organism which also expresses the first polypeptide, or it may be an "interspecies," "intergenic," etc., fusion of polypeptide structures expressed by different kinds of organisms. In general, a fusion polypeptide can be represented by the general formula  $(X)_n-(Y)_m-(Z)_n$ , wherein Y represents a portion of the subject polypeptide, and X and Z are each independently absent or represent amino acid sequences which are not related to the native sequence found in an organism, or which are not found as a polypeptide

chain contiguous with the subject sequence, where m is an integer greater than or equal to one, and each occurrence of n is, independently, 0 or an integer greater than or equal to 1 (n and m are preferably no greater than 5 or 10).

5 A "delivery complex" shall mean a targeting means (e.g., a molecule that results in higher affinity binding of a nucleic acid, protein, polypeptide or peptide to a target cell surface and/or increased cellular or nuclear uptake by a target cell). Examples of targeting means include: sterols (e.g., cholesterol), lipids (e.g., a cationic lipid, virosome or liposome), viruses (e.g., adenovirus, adeno-associated virus, and retrovirus), or target cell-specific binding agents (e.g., ligands recognized by target  
10 cell specific receptors). Preferred complexes are sufficiently stable *in vivo* to prevent significant uncoupling prior to internalization by the target cell. However, the complex is cleavable under appropriate conditions within the cell so that the nucleic acid, protein, polypeptide or peptide is released in a functional form.

As is well known, genes or a particular polypeptide may exist in single or  
15 multiple copies within the genome of an individual. Such duplicate genes may be identical or may have certain modifications, including nucleotide substitutions, additions or deletions, which all still code for polypeptides having substantially the same activity. The term "DNA sequence encoding a polypeptide" may thus refer to one or more genes within a particular individual. Moreover, certain differences in  
20 nucleotide sequences may exist between individual organisms, which are called alleles. Such allelic differences may or may not result in differences in amino acid sequence of the encoded polypeptide yet still encode a polypeptide with the same biological activity.

The term "equivalent" is understood to include nucleotide sequences encoding  
25 functionally equivalent polypeptides. Equivalent nucleotide sequences will include sequences that differ by one or more nucleotide substitutions, additions or deletions, such as allelic variants; and will, therefore, include sequences that differ from the nucleotide sequence of the nucleic acids shown in SEQ ID NOs: 1-850 due to the degeneracy of the genetic code.

30 As used herein, the terms "gene", "recombinant gene", and "gene construct" refer to a nucleic acid of the present invention associated with an open reading frame, including both exon and (optionally) intron sequences.

A "recombinant gene" refers to nucleic acid encoding a polypeptide and comprising exon sequences, though it may optionally include intron sequences which are derived from, for example, a related or unrelated chromosomal gene. The term "intron" refers to a DNA sequence present in a given gene which is not translated into protein and is generally found between exons.

The term "growth" or "growth state" of a cell refers to the proliferative state of a cell as well as to its differentiative state. Accordingly, the term refers to the phase of the cell cycle in which the cell is, e.g., G0, G1, G2, prophase, metaphase, or telophase, as well as to its state of differentiation, e.g., undifferentiated, partially differentiated, or fully differentiated. Without wanting to be limited, differentiation of a cell is usually accompanied by a decrease in the proliferative rate of a cell.

"Homology" or "identity" or "similarity" refers to sequence similarity between two peptides or between two nucleic acid molecules, with identity being a more strict comparison. Homology and identity can each be determined by comparing a position in each sequence which may be aligned for purposes of comparison. When a position in the compared sequence is occupied by the same base or amino acid, then the molecules are identical at that position. A degree of homology or similarity or identity between nucleic acid sequences is a function of the number of identical or matching nucleotides at positions shared by the nucleic acid sequences. A degree of identity of amino acid sequences is a function of the number of identical amino acids at positions shared by the amino acid sequences. A degree of homology or similarity of amino acid sequences is a function of the number of amino acids, i.e., structurally related, at positions shared by the amino acid sequences. An "unrelated" or "non-homologous" sequence shares less than 40% identity, though preferably less than 25% identity, with one of the sequences of the present invention.

The term "percent identical" refers to sequence identity between two amino acid sequences or between two nucleotide sequences. Identity can each be determined by comparing a position in each sequence which may be aligned for purposes of comparison. When an equivalent position in the compared sequences is occupied by the same base or amino acid, then the molecules are identical at that position; when the equivalent site occupied by the same or a similar amino acid residue (e.g., similar in steric and/or electronic nature), then the molecules can be referred to as

homologous (similar) at that position. Expression as a percentage of homology, similarity, or identity refers to a function of the number of identical or similar amino acids at positions shared by the compared sequences. Various alignment algorithms and/or programs may be used, including FASTA, BLAST, or ENTREZ. FASTA and BLAST are available as a part of the GCG sequence analysis package (University of Wisconsin, Madison, Wis.), and can be used with, e.g., default settings. ENTREZ is available through the National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health, Bethesda, Md. In one embodiment, the percent identity of two sequences can be determined by the GCG program with a gap weight of 1, e.g., each amino acid gap is weighted as if it were a single amino acid or nucleotide mismatch between the two sequences.

Other techniques for alignment are described in Methods in Enzymology, vol. 266: Computer Methods for Macromolecular Sequence Analysis (1996), ed. Doolittle, Academic Press, Inc., a division of Harcourt Brace & Co., San Diego, California, USA. Preferably, an alignment program that permits gaps in the sequence is utilized to align the sequences. The Smith-Waterman is one type of algorithm that permits gaps in sequence alignments. See Meth. Mol. Biol. 70: 173-187 (1997). Also, the GAP program using the Needleman and Wunsch alignment method can be utilized to align sequences. An alternative search strategy uses MPSRCH software, which runs on a MASPAR computer. MPSRCH uses a Smith-Waterman algorithm to score sequences on a massively parallel computer. This approach improves ability to pick up distantly related matches, and is especially tolerant of small gaps and nucleotide sequence errors. Nucleic acid-encoded amino acid sequences can be used to search both protein and DNA databases.

Databases with individual sequences are described in Methods in Enzymology, ed. Doolittle, *supra*. Databases include Genbank, EMBL, and DNA Database of Japan (DDBJ).

Preferred nucleic acids have a sequence at least 70%, and more preferably 80% identical and more preferably 90% and even more preferably at least 95% identical to an nucleic acid sequence of a sequence shown in one of SEQ ID NOS: 1-850. Nucleic acids at least 90%, more preferably 95%, and most preferably at least about 98-99% identical with a nucleic sequence represented in one of SEQ ID NOS:

1-850 are of course also within the scope of the invention. In preferred embodiments, the nucleic acid is mammalian.

The term "interact" as used herein is meant to include detectable interactions (e.g., biochemical interactions) between molecules, such as interaction between  
5 protein-protein, protein-nucleic acid, nucleic acid-nucleic acid, and protein-small molecule or nucleic acid-small molecule in nature.

The term "isolated" as used herein with respect to nucleic acids, such as DNA or RNA, refers to molecules separated from other DNAs, or RNAs, respectively, that are present in the natural source of the macromolecule. The term isolated as used  
10 herein also refers to a nucleic acid or peptide that is substantially free of cellular material, viral material, or culture medium when produced by recombinant DNA techniques, or chemical precursors or other chemicals when chemically synthesized. Moreover, an "isolated nucleic acid" is meant to include nucleic acid fragments which are not naturally occurring as fragments and would not be found in the natural state.  
15 The term "isolated" is also used herein to refer to polypeptides which are isolated from other cellular proteins and is meant to encompass both purified and recombinant polypeptides.

The terms "modulated" and "differentially regulated" as used herein refer to both upregulation (i.e., activation or stimulation (e.g., by agonizing or potentiating))  
20 and downregulation (i.e., inhibition or suppression (e.g., by antagonizing, decreasing or inhibiting)).

The term "mutated gene" refers to an allelic form of a gene, which is capable of altering the phenotype of a subject having the mutated gene relative to a subject which does not have the mutated gene. If a subject must be homozygous for this  
25 mutation to have an altered phenotype, the mutation is said to be recessive. If one copy of the mutated gene is sufficient to alter the genotype of the subject, the mutation is said to be dominant. If a subject has one copy of the mutated gene and has a phenotype that is intermediate between that of a homozygous and that of a heterozygous subject (for that gene), the mutation is said to be co-dominant.

30 The designation "N", where it appears in the accompanying Sequence Listing, indicates that the identity of the corresponding nucleotide is unknown. "N" should therefore not necessarily be interpreted as permitting substitution with any nucleotide,

e.g., A, T, C, or G, but rather as holding the place of a nucleotide whose identity has not been conclusively determined.

The "non-human animals" of the invention include mammals such as rodents, non-human primates, sheep, dog, cow, chickens, amphibians, reptiles, etc.

5 Preferred non-human animals are selected from the rodent family including rat and mouse, most preferably mouse, though transgenic amphibians, such as members of the *Xenopus* genus, and transgenic chickens can also provide important tools for understanding and identifying agents which can affect, for example, embryogenesis and tissue formation. The term "chimeric animal" is used herein to refer to animals in  
10 which the recombinant gene is found, or in which the recombinant gene is expressed in some but not all cells of the animal. The term "tissue-specific chimeric animal" indicates that one of the recombinant genes is present and/or expressed or disrupted in some tissues but not others.

As used herein, the term "nucleic acid" refers to polynucleotides such as  
15 deoxyribonucleic acid (DNA), and, where appropriate, ribonucleic acid (RNA). The term should also be understood to include, as equivalents, analogs of either RNA or DNA made from nucleotide analogs, and, as applicable to the embodiment being described, single (sense or antisense) and double-stranded polynucleotides. ESTs, chromosomes, cDNAs, mRNAs, and rRNAs are representative examples of molecules  
20 that may be referred to as nucleic acids.

The term "nucleotide sequence complementary to the nucleotide sequence of SEQ ID NO. x" refers to the nucleotide sequence of the complementary strand of a nucleic acid strand having SEQ ID NO. x. The term "complementary strand" is used herein interchangeably with the term "complement". The complement of a nucleic  
25 acid strand can be the complement of a coding strand or the complement of a non-coding strand.

The term "polymorphism" refers to the coexistence of more than one form of a gene or portion (e.g., allelic variant) thereof. A portion of a gene of which there are at least two different forms, i.e., two different nucleotide sequences, is referred to as a  
30 "polymorphic region of a gene". A polymorphic region can be a single nucleotide, the identity of which differs in different alleles. A polymorphic region can also be several nucleotides long.



A "polymorphic gene" refers to a gene having at least one polymorphic region.

As used herein, the term "promoter" means a DNA sequence that regulates expression of a selected DNA sequence operably linked to the promoter, and which effects expression of the selected DNA sequence in cells. The term encompasses

5 "tissue specific" promoters, i.e., promoters which effect expression of the selected DNA sequence only in specific cells (e.g., cells of a specific tissue). The term also covers so-called "leaky" promoters, which regulate expression of a selected DNA primarily in one tissue, but cause expression in other tissues as well. The term also encompasses non-tissue specific promoters and promoters that constitutively express

10 or that are inducible (i.e., expression levels can be controlled).

The terms "protein", "polypeptide", and "peptide" are used interchangeably herein when referring to a gene product.

The term "recombinant protein" refers to a polypeptide of the present invention which is produced by recombinant DNA techniques, wherein generally,

15 DNA encoding a polypeptide is inserted into a suitable expression vector which is in turn used to transform a host cell to produce the heterologous protein. Moreover, the phrase "derived from", with respect to a recombinant gene, is meant to include within the meaning of "recombinant protein" those proteins having an amino acid sequence of a native polypeptide, or an amino acid sequence similar thereto which is generated

20 by mutations including substitutions and deletions (including truncation) of a naturally occurring form of the polypeptide.

"Small molecule" as used herein, is meant to refer to a composition, which has a molecular weight of less than about 5 kD and most preferably less than about 4 kD. Small molecules can be nucleic acids, peptides, polypeptides, peptidomimetics,

25 carbohydrates, lipids or other organic (carbon-containing) or inorganic molecules. Many pharmaceutical companies have extensive libraries of chemical and/or biological mixtures, often fungal, bacterial, or algal extracts, which can be screened with any of the assays of the invention to identify compounds that modulate a bioactivity.

30 As used herein, the term "specifically hybridizes" or "specifically detects" refers to the ability of a nucleic acid molecule of the invention to hybridize to at least a portion of, for example approximately 6, 12, 15, 20, 30, 50, 100, 150, 200, 300, 350,

400, 500, 750 or 1000 contiguous nucleotides of a nucleic acid designated in any one of SEQ ID Nos: 1-850, or a sequence complementary thereto, or naturally occurring mutants thereof, such that it has less than 15%, preferably less than 10%, and more preferably less than 5% background hybridization to a cellular nucleic acid (e.g., mRNA or genomic DNA) encoding a different protein. In preferred embodiments, the oligonucleotide probe detects only a specific nucleic acid, e.g., it does not substantially hybridize to similar or related nucleic acids, or complements thereof.

"Transcriptional regulatory sequence" is a generic term used throughout the specification to refer to DNA sequences, such as initiation signals, enhancers, and promoters, which induce or control transcription of protein coding sequences with which they are operably linked. In preferred embodiments, transcription of one of the genes is under the control of a promoter sequence (or other transcriptional regulatory sequence) which controls the expression of the recombinant gene in a cell-type in which expression is intended. It will also be understood that the recombinant gene can be under the control of transcriptional regulatory sequences which are the same or which are different from those sequences which control transcription of the naturally-occurring forms of the polypeptide.

As used herein, the term "transfection" means the introduction of a nucleic acid, e.g., via an expression vector, into a recipient cell by nucleic acid-mediated gene transfer. "Transformation", as used herein, refers to a process in which a cell's genotype is changed as a result of the cellular uptake of exogenous DNA or RNA, and, for example, the transformed cell expresses a recombinant form of a polypeptide or, in the case of anti-sense expression from the transferred gene, the expression of the target gene is disrupted.

As used herein, the term "transgene" means a nucleic acid sequence (or an antisense transcript thereto) which has been introduced into a cell. A transgene could be partly or entirely heterologous, i.e., foreign, to the transgenic animal or cell into which it is introduced, or, is homologous to an endogenous gene of the transgenic animal or cell into which it is introduced, but which is designed to be inserted, or is inserted, into the animal's genome in such a way as to alter the genome of the cell into which it is inserted (e.g., it is inserted at a location which differs from that of the natural gene or its insertion results in a knockout). A transgene can also be present in

a cell in the form of an episome. A transgene can include one or more transcriptional regulatory sequences and any other nucleic acid, such as introns, that may be necessary for optimal expression of a selected nucleic acid.

A "transgenic animal" refers to any animal, preferably a non-human mammal, 5 bird or an amphibian, in which one or more of the cells of the animal contain heterologous nucleic acid introduced by way of human intervention, such as by transgenic techniques well known in the art. The nucleic acid is introduced into the cell, directly or indirectly by introduction into a precursor of the cell, by way of deliberate genetic manipulation, such as by microinjection or by infection with a 10 recombinant virus. The term genetic manipulation does not include classical cross-breeding, or *in vitro* fertilization, but rather is directed to the introduction of a recombinant DNA molecule. This molecule may be integrated within a chromosome, or it may be extra-chromosomally replicating DNA. In the typical transgenic animals described herein, the transgene causes cells to express a recombinant form of one of 15 the subject polypeptide, e.g. either agonistic or antagonistic forms. However, transgenic animals in which the recombinant gene is silent are also contemplated, as for example, the FLP or CRE recombinase dependent constructs described below. Moreover, "transgenic animal" also includes those recombinant animals in which gene disruption of one or more genes is caused by human intervention, including both 20 recombination and antisense techniques.

The term "treating" as used herein is intended to encompass curing as well as ameliorating at least one symptom of the condition or disease.

The term "vector" refers to a nucleic acid molecule capable of transporting another nucleic acid to which it has been linked. One type of preferred vector is an 25 episome, i.e., a nucleic acid capable of extra-chromosomal replication. Preferred vectors are those capable of autonomous replication and/or expression of nucleic acids to which they are linked. Vectors capable of directing the expression of genes to which they are operatively linked are referred to herein as "expression vectors". In general, expression vectors of utility in recombinant DNA techniques are often in the 30 form of "plasmids" which refer generally to circular double stranded DNA loops which, in their vector form are not bound to the chromosome. In the present specification, "plasmid" and "vector" are used interchangeably as the plasmid is the

most commonly used form of vector. However, the invention is intended to include such other forms of expression vectors which serve equivalent functions and which become known in the art subsequently hereto.

5 The term "wild-type allele" refers to an allele of a gene which, when present in two copies in a subject results in a wild-type phenotype. There can be several different wild-type alleles of a specific gene, since certain nucleotide changes in a gene may not affect the phenotype of a subject having two copies of the gene with the nucleotide changes.

10 III. Nucleic Acids of the Present Invention

As described below, one aspect of the invention pertains to isolated nucleic acids, variants, and/or equivalents of such nucleic acids.

15 Nucleic acids of the present invention have been identified as differentially expressed in tumor cells, e.g., colon cancer-derived cell lines (relative to the expression levels in normal tissue, e.g., normal colon tissue and/or normal non-colon tissue), such as SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto. In certain embodiments, the subject nucleic acids are differentially expressed by at least a factor of two, preferably at least a factor of five, even more preferably at least a factor of  
20 twenty, still more preferably at least a factor of fifty. Preferred nucleic acids include sequences identified as differentially expressed both in colon cancer cell tissue and colon cancer cell lines. In preferred embodiments, nucleic acids of the present invention are upregulated in tumor cells, especially colon cancer tissue and/or colon cancer-derived cell lines. In another embodiment, nucleic acids of the present  
25 invention are downregulated in tumor cells, especially colon cancer tissue and/or colon cancer-derived cell lines.

Table 1 indicates those sequences which are over- or underexpressed in a colon cancer-derived cell line relative to normal tissue, and further designates those sequences which are also differentially regulated in colon cancer tissue. The  
30 designation O indicates that the corresponding sequence was overexpressed, M indicates possible overexpression, N indicates no differential expression, and U indicates underexpression.

Genes which are upregulated, such as oncogenes, or downregulated, such as tumor suppressors, in aberrantly proliferating cells may be targets for diagnostic or therapeutic techniques. For example, upregulation of the *cdc2* gene induces mitosis. Overexpression of the *myt1* gene, a mitotic deactivator, negatively regulates the activity of *cdc2*. Aberrant proliferation may thus be induced either by upregulating *cdc2* or by downregulating *myt1*. Similarly, downregulation of tumor suppressors such as *p53* and *Rb* have been implicated in tumorigenesis.

Particularly preferred polypeptides are those that are encoded by nucleic acid sequences at least about 70%, 75%, 80%, 90%, 95%, 97%, or 98% similar to a nucleic acid sequence of SEQ ID Nos. 1-850. Preferably, the nucleic acid includes all or a portion (e.g., at least about 12, at least about 15, at least about 25, or at least about 40 nucleotides) of the nucleotide sequence corresponding to the nucleic acid of SEQ ID Nos. 1-383, preferably SEQ ID Nos. 1-127, or a sequence complementary thereto.

Still other preferred nucleic acids of the present invention encode a polypeptide comprising at least a portion of a polypeptide encoded by one of SEQ ID Nos. 1-850. For example, preferred nucleic acid molecules for use as probes/primers or antisense molecules (i.e., noncoding nucleic acid molecules) can comprise at least about 12, 20, 30, 50, 60, 70, 80, 90, or 100 base pairs in length up to the length of the complete gene. Coding nucleic acid molecules can comprise, for example, from about 50, 60, 70, 80, 90, or 100 base pairs up to the length of the complete gene.

Another aspect of the invention provides a nucleic acid which hybridizes under low, medium, or high stringency conditions to a nucleic acid sequence represented by one of SEQ ID Nos. 1-383, preferably SEQ ID Nos. 1-127, or a sequence complementary thereto. Appropriate stringency conditions which promote DNA hybridization, for example, 6.0 x sodium chloride/sodium citrate (SSC) at about 45 °C, followed by a wash of 2.0 x SSC at 50 °C, are known to those skilled in the art or can be found in Current Protocols in Molecular Biology, John Wiley & Sons, N.Y. (1989), 6.3.1-12.3.6. For example, the salt concentration in the wash step can be selected from a low stringency of about 2.0 x SSC at 50 °C to a high stringency of about 0.2 x SSC at 50 °C. In addition, the temperature in the wash step can be increased from low stringency conditions at room temperature, about 22 °C, to high stringency conditions at about 65 °C. Both temperature and salt may be varied, or

temperature or salt concentration may be held constant while the other variable is changed. In a preferred embodiment, a nucleic acid of the present invention will bind to one of SEQ ID Nos. 1-383, preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, under moderately stringent conditions, for example at about 5 2.0 x SSC and about 40 °C. In a particularly preferred embodiment, a nucleic acid of the present invention will bind to one of SEQ ID Nos. 1-383, preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, under high stringency conditions.

In one embodiment, the invention provides nucleic acids which hybridize under low stringency conditions of 6 x SSC at room temperature followed by a wash 10 at 2 x SSC at room temperature.

In another embodiment, the invention provides nucleic acids which hybridize under high stringency conditions of 2 x SSC at 65 °C followed by a wash at 0.2 x SSC at 65 °C.

Nucleic acids having a sequence that differs from the nucleotide sequences 15 shown in one of SEQ ID Nos. 1-383, preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, due to degeneracy in the genetic code, are also within the scope of the invention. Such nucleic acids encode functionally equivalent peptides (i.e., a peptide having equivalent or similar biological activity) but differ in sequence from the sequence shown in the sequence listing due to degeneracy in the genetic 20 code. For example, a number of amino acids are designated by more than one triplet. Codons that specify the same amino acid, or synonyms (for example, CAU and CAC each encode histidine) may result in "silent" mutations which do not affect the amino acid sequence of a polypeptide. However, it is expected that DNA sequence polymorphisms that do lead to changes in the amino acid sequences of the subject 25 polypeptides will exist among mammals. One skilled in the art will appreciate that these variations in one or more nucleotides (e.g., up to about 3-5% of the nucleotides) of the nucleic acids encoding polypeptides having an activity of a polypeptide may exist among individuals of a given species due to natural allelic variation.

Also within the scope of the invention are nucleic acids encoding splicing 30 variants of proteins encoded by a nucleic acid of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence

complementary thereto, or natural homologs of such proteins. Such homologs can be cloned by hybridization or PCR, as further described herein.

The polynucleotide sequence may also encode for a leader sequence, e.g., the natural leader sequence or a heterologous leader sequence, for a subject polypeptide.

- 5 For example, the desired DNA sequence may be fused in the same reading frame to a DNA sequence which aids in expression and secretion of the polypeptide from the host cell, for example, a leader sequence which functions as a secretory sequence for controlling transport of the polypeptide from the cell. The protein having a leader sequence is a preprotein and may have the leader sequence cleaved by the host cell to  
10 form the mature form of the protein.

- The polynucleotide of the present invention may also be fused in frame to a marker sequence, also referred to herein as "Tag sequence" encoding a "Tag peptide", which allows for marking and/or purification of the polypeptide of the present invention. In a preferred embodiment, the marker sequence is a hexahistidine tag,  
15 e.g., supplied by a PQE-9 vector. Numerous other Tag peptides are available commercially. Other frequently used Tags include myc-epitopes (e.g., see Ellison et al. (1991) *J Biol Chem* 266:21150-21157) which includes a 10-residue sequence from c-myc, the pFLAG system (International Biotechnologies, Inc.), the pEZZ-protein A system (Pharmacia, NJ), and a 16 amino acid portion of the *Haemophilus influenza*  
20 hemagglutinin protein. Furthermore, any polypeptide can be used as a Tag so long as a reagent, e.g., an antibody interacting specifically with the Tag polypeptide is available or can be prepared or identified.

- As indicated by the examples set out below, nucleic acids can be obtained from mRNA present in any of a number of eukaryotic cells, e.g., and are preferably  
25 obtained from metazoan cells, more preferably from vertebrate cells, and even more preferably from mammalian cells. It should also be possible to obtain nucleic acids of the present invention from genomic DNA from both adults and embryos. For example, a gene can be cloned from either a cDNA or a genomic library in accordance with protocols generally known to persons skilled in the art. cDNA can be obtained by  
30 isolating total mRNA from a cell, e.g., a vertebrate cell, a mammalian cell, or a human cell, including embryonic cells. Double stranded cDNAs can then be prepared from the total mRNA, and subsequently inserted into a suitable plasmid or bacteriophage

vector using any one of a number of known techniques. The gene can also be cloned using established polymerase chain reaction techniques in accordance with the nucleotide sequence information provided by the invention.

5 In certain embodiments, a nucleic acid, probe, vector, or other construct of the present invention includes at least about five, at least about ten, or at least about twenty nucleic acids from a region designated as novel in Table 2. In certain other embodiments, a nucleic acid of the present invention includes at least about five, at least about ten, or at least about twenty nucleic acids which are not included in the clones whose accession numbers are listed in Table 2.

10 The invention includes within its scope a polynucleotide having the nucleotide sequence of nucleic acid obtained from this biological material, wherein the nucleic acid hybridizes under stringent conditions (at least about 4 x SSC at 65°C, or at least about 4 x SSC at 42°C; see, for example, U.S. Patent No. 5,707,829, incorporated herein by reference) with at least 15 contiguous nucleotides of at least one of SEQ ID  
15 Nos. 1-850. By this is intended that when at least 15 contiguous nucleotides of one of SEQ ID Nos. 1-850 is used as a probe, the probe will preferentially hybridize with a gene or mRNA (of the biological material) comprising the complementary sequence, allowing the identification and retrieval of the nucleic acids of the biological material that uniquely hybridize to the selected probe. Probes from more than one of SEQ ID  
20 Nos. 1-850 will hybridize with the same gene or mRNA if the cDNA from which they were derived corresponds to one mRNA. Probes of more than 15 nucleotides can be used, but 15 nucleotides represents enough sequence for unique identification.

Because the present nucleic acids represent partial mRNA transcripts, two or more nucleic acids of the invention may represent different regions of the same  
25 mRNA transcript and the same gene. Thus, if two or more of SEQ ID Nos. 1-850 are identified as belonging to the same clone, then either sequence can be used to obtain the full-length mRNA or gene.

Nucleic acid-related polynucleotides can also be isolated from cDNA libraries. These libraries are preferably prepared from mRNA of human colon cells, more  
30 preferably, human colon cancer cells, even more preferably, from a human colon adenocarcinoma cell line, SW480. Alignment of SEQ ID Nos. 1-850, as described



above, can indicate that a cell line or tissue source of a related protein or polynucleotide can also be used as a source of the nucleic acid-related cDNA.

Techniques for producing and probing nucleic acid sequence libraries are described, for example, in Sambrook *et al.*, "Molecular Cloning: A Laboratory Manual" (New York, Cold Spring Harbor Laboratory, 1989). The cDNA can be prepared by using primers based on a sequence from SEQ ID Nos. 1-850. In one embodiment, the cDNA library can be made from only poly-adenylated mRNA. Thus, poly-T primers can be used to prepare cDNA from the mRNA. Alignment of SEQ ID Nos. 1-850 can result in identification of a related polypeptide or polynucleotide. Some of the polynucleotides disclosed herein contains repetitive regions that were subject to masking during the search procedures. The information about the repetitive regions is discussed below.

Constructs of polynucleotides having sequences of SEQ ID Nos. 1-850 can be generated synthetically. Alternatively, single-step assembly of a gene and entire plasmid from large numbers of oligodeoxyribonucleotides is described by Stemmer *et al.*, *Gene (Amsterdam)* (1995) 164(1):49-53. In this method, assembly PCR (the synthesis of long DNA sequences from large numbers of oligodeoxyribonucleotides (oligos)) is described. The method is derived from DNA shuffling (Stemmer, *Nature* (1994) 370:389-391), and does not rely on DNA ligase, but instead relies on DNA polymerase to build increasingly longer DNA fragments during the assembly process. For example, a 1.1-kb fragment containing the TEM-1 beta-lactamase-encoding gene (*bla*) can be assembled in a single reaction from a total of 56 oligos, each 40 nucleotides (nt) in length. The synthetic gene can be PCR amplified and cloned in a vector containing the tetracycline-resistance gene (Tc-R) as the sole selectable marker. Without relying on ampicillin (Ap) selection, 76% of the Tc-R colonies were Ap-R, making this approach a general method for the rapid and cost-effective synthesis of any gene.

#### IV. Identification of Functional and Structural Motifs of Novel Genes Using Art-Recognized Methods

Translations of the nucleotide sequence of the nucleic acids, cDNAs, or full genes can be aligned with individual known sequences. Similarity with individual

sequences can be used to determine the activity of the polypeptides encoded by the polynucleotides of the invention. For example, sequences that show similarity with a chemokine sequence may exhibit chemokine activities. Also, sequences exhibiting similarity with more than one individual sequence may exhibit activities that are

5 characteristic of either or both individual sequences.

The full length sequences and fragments of the polynucleotide sequences of the nearest neighbors can be used as probes and primers to identify and isolate the full length sequence of the nucleic acid. The nearest neighbors can indicate a tissue or cell type to be used to construct a library for the full-length sequences of the nucleic acid.

10 Typically, the nucleic acids are translated in all six frames to determine the best alignment with the individual sequences. The sequences disclosed herein in the Sequence Listing are in a 5' to 3' orientation and translation in three frames can be sufficient (with a few specific exceptions as described in the Examples). These amino acid sequences are referred to, generally, as query sequences, which will be aligned

15 with the individual sequences.

Nucleic acid sequences can be compared with known genes by any of the methods disclosed above. Results of individual and query sequence alignments can be divided into three categories: high similarity, weak similarity, and no similarity. Individual alignment results ranging from high similarity to weak similarity provide a

20 basis for determining polypeptide activity and/or structure.

Parameters for categorizing individual results include: percentage of the alignment region length where the strongest alignment is found, percent sequence identity, and p value.

The percentage of the alignment region length is calculated by counting the

25 number of residues of the individual sequence found in the region of strongest alignment. This number is divided by the total residue length of the query sequence to find a percentage. An example is shown below:

Query sequence:	ASNP	ERTM	IPV	TRV	GLIR	YM
Individual sequence:	YMM	TEYL	AI	PV	.RV	GLPRYM
	1	5	10	15		

30

The region of alignment begins at amino acid 9 and ends at amino acid 19. The total length of the query sequence is 20 amino acids. The percent of the alignment region length is 11/20 or 55%.

Percent sequence identity is calculated by counting the number of amino acid matches between the query and individual sequence and dividing total number of matches by the number of residues of the individual sequence found in the region of strongest alignment. For the example above, the percent identity would be 10 matches divided by 11 amino acids, or approximately 90.9%.

P value is the probability that the alignment was produced by chance. For a single alignment, the p value can be calculated according to Karlin *et al.*, Proc. Natl. Acad. Sci. 87: 2264 (1990) and Karlin *et al.*, Proc. Natl. Acad. Sci. 90: (1993). The p value of multiple alignments using the same query sequence can be calculated using an heuristic approach described in Altschul *et al.*, Nat. Genet. 6: 119 (1994).

Alignment programs such as BLAST program can calculate the p value.

The boundaries of the region where the sequences align can be determined according to Doolittle, *Methods in Enzymology*, *supra*; BLAST or FASTA programs; or by determining the area where the sequence identity is highest.

Another factor to consider for determining identity or similarity is the location of the similarity or identity. Strong local alignment can indicate similarity even if the length of alignment is short. Sequence identity scattered throughout the length of the query sequence also can indicate a similarity between the query and profile sequences.

#### High Similarity**Error! Bookmark not defined.**

For the alignment results to be considered high similarity, the percent of the alignment region length, typically, is at least about 55% of total length query sequence; more typically, at least about 58%; even more typically, at least about 60% of the total residue length of the query sequence. Usually, percent length of the alignment region can be as much as about 62%; more usually, as much as about 64%; even more usually, as much as about 66%.

Further, for high similarity, the region of alignment, typically, exhibits at least about 75% of sequence identity; more typically, at least about 78%; even more typically, at least about 80% sequence identity. Usually, percent sequence identity

can be as much as about 82%; more usually, as much as about 84%; even more usually, as much as about 86%.

The p value is used in conjunction with these methods. If high similarity is found, the query sequence is considered to have high similarity with a profile  
5 sequence when the p value is less than or equal to about  $10^{-2}$ ; more usually; less than or equal to about  $10^{-3}$ ; even more usually; less than or equal to about  $10^{-4}$ . More typically, the p value is no more than about  $10^{-5}$ ; more typically; no more than or equal to about  $10^{-10}$ ; even more typically; no more than or equal to about  $10^{-15}$  for the query sequence to be considered high similarity.

10

#### Weak Similarity

For the alignment results to be considered weak similarity, there is no minimum percent length of the alignment region nor minimum length of alignment. A better showing of weak similarity is considered when the region of alignment is,  
15 typically, at least about 15 amino acid residues in length; more typically, at least about 20; even more typically; at least about 25 amino acid residues in length. Usually, length of the alignment region can be as much as about 30 amino acid residues; more usually, as much as about 40; even more usually, as much as about 60 amino acid residues.

20 Further, for weak similarity, the region of alignment, typically, exhibits at least about 35% of sequence identity; more typically, at least about 40%; even more typically; at least about 45% sequence identity. Usually, percent sequence identity can be as much as about 50%; more usually, as much as about 55%; even more usually, as much as about 60%.

25 If low similarity is found, the query sequence is considered to have weak similarity with a profile sequence when the p value is usually less than or equal to about  $10^{-2}$ ; more usually; less than or equal to about  $10^{-3}$ ; even more usually; less than or equal to about  $10^{-4}$ . More typically, the p value is no more than about  $10^{-5}$ ; more usually; no more than or equal to about  $10^{-10}$ ; even more usually; no more than or  
30 equal to about  $10^{-15}$  for the query sequence to be considered weak similarity.

**Similarity Determined by Sequence Identity Alone**Error! Bookmark not defined.

Sequence identity alone can be used to determine similarity of a query sequence to an individual sequence and can indicate the activity of the sequence. Such an alignment, preferably, permits gaps to align sequences. Typically, the query sequence is related to the profile sequence if the sequence identity over the entire query sequence is at least about 15%; more typically, at least about 20%; even more typically, at least about 25%; even more typically, at least about 50%. Sequence identity alone as a measure of similarity is most useful when the query sequence is usually, at least 80 residues in length; more usually, 90 residues; even more usually, at least 95 amino acid residues in length. More typically, similarity can be concluded based on sequence identity alone when the query sequence is preferably 100 residues in length; more preferably, 120 residues in length; even more preferably, 150 amino acid residues in length.

**Determining Activity from Alignments with Profile and Multiple Aligned Sequences**

Translations of the nucleic acids can be aligned with amino acid profiles that define either protein families or common motifs. Also, translations of the nucleic acids can be aligned to multiple sequence alignments (MSA) comprising the polypeptide sequences of members of protein families or motifs. Similarity or identity with profile sequences or MSAs can be used to determine the activity of the polypeptides encoded by nucleic acids or corresponding cDNA or genes. For example, sequences that show an identity or similarity with a chemokine profile or MSA can exhibit chemokine activities.

Profiles can be designed manually by (1) creating a MSA, which is an alignment of the amino acid sequence of members that belong to the family and (2) constructing a statistical representation of the alignment. Such methods are described, for example, in Birney *et al.*, Nucl. Acid Res. **24(14)**: 2730-2739 (1996).

MSAs of some protein families and motifs are publicly available. For example, these include MSAs of 547 different families and motifs. These MSAs are described also in Sonnhammer *et al.*, Proteins **28**: 405-420 (1997). Other sources are also available in the world wide web. A brief description of these MSAs is reported in Pascarella *et al.*, Prot. Eng. **9(3)**: 249-251 (1996).

Techniques for building profiles from MSAs are described in Sonnhammer *et al.*, *supra*; Birney *et al.*, *supra*; and Methods in Enzymology, vol. 266: "Computer Methods for Macromolecular Sequence Analysis," 1996, ed. Doolittle, Academic Press, Inc., a division of Harcourt Brace & Co., San Diego, California, USA.

5        Similarity between a query sequence and a protein family or motif can be determined by (a) comparing the query sequence against the profile and/or (b) aligning the query sequence with the members of the family or motif.

Typically, a program such as Searchwise can be used to compare the query sequence to the statistical representation of the multiple alignment, also known as a  
10       profile. The program is described in Birney *et al.*, *supra*. Other techniques to compare the sequence and profile are described in Sonnhammer *et al.*, *supra* and Doolittle, *supra*.

Next, methods described by Feng *et al.*, J. Mol. Evol. 25: 351-360 (1987) and Higgins *et al.*, CABIOS 5: 151-153 (1989) can be used align the query sequence with  
15       the members of a family or motif, also known as a MSA. Computer programs, such as PILEUP, can be used. See Feng *et al.*, *infra*.

The following factors are used to determine if a similarity between a query sequence and a profile or MSA exists: (1) number of conserved residues found in the query sequence, (2) percentage of conserved residues found in the query sequence, (3)  
20       number of frameshifts, and (4) spacing between conserved residues.

Some alignment programs that both translate and align sequences can make any number of frameshifts when translating the nucleotide sequence to produce the best alignment. The fewer frameshifts needed to produce an alignment, the stronger the similarity or identity between the query and profile or MSAs. For example, a  
25       weak similarity resulting from no frameshifts can be a better indication of activity or structure of a query sequence, than a strong similarity resulting from two frameshifts. Preferably, three or fewer frameshifts are found in an alignment; more preferably two or fewer frameshifts; even more preferably, one or fewer frameshifts; even more preferably, no frameshifts are found in an alignment of query and profile or MSAs.

30       Conserved residues are those amino acids that are found at a particular position in all or some of the family or motif members. For example, most known chemokines contain four conserved cysteines. Alternatively, a position is considered

conserved if only a certain class of amino acids is found in a particular position in all or some of the family members. For example, the N-terminal position may contain a positively charged amino acid, such as lysine, arginine, or histidine.

Typically, a residue of a polypeptide is conserved when a class of amino acids  
5 or a single amino acid is found at a particular position in at least about 40% of all class members; more typically, at least about 50%; even more typically, at least about 60% of the members. Usually, a residue is conserved when a class or single amino acid is found in at least about 70% of the members of a family or motif; more usually, at least about 80%; even more usually, at least about 90%; even more usually, at least  
10 about 95%.

A residue is considered conserved when three unrelated amino acids are found at a particular position in the some or all of the members; more usually, two unrelated amino acids. These residues are conserved when the unrelated amino acids are found at particular positions in at least about 40% of all class member; more typically, at  
15 least about 50%; even more typically, at least about 60% of the members. Usually, a residue is conserved when a class or single amino acid is found in at least about 70% of the members of a family or motif; more usually, at least about 80%; even more usually, at least about 90%; even more usually, at least about 95%.

A query sequence has similarity to a profile or MSA when the query sequence  
20 comprises at least about 25% of the conserved residues of the profile or MSA; more usually, at least about 30%; even more usually; at least about 40%. Typically, the query sequence has a stronger similarity to a profile sequence or MSA when the query sequence comprises at least about 45% of the conserved residues of the profile or MSA; more typically, at least about 50%; even more typically; at least about 55%.

25

#### V. Probes and Primers

The nucleotide sequences determined from the cloning of genes from tumor cells, especially colon cancer cell lines and tissues will further allow for the generation of probes and primers designed for identifying and/or cloning homologs in  
30 other cell types, e.g., from other tissues, as well as homologs from other mammalian organisms. Nucleotide sequences useful as probes/primers may include all or a portion of the sequences listed in SEQ ID Nos. 1-850 or sequences complementary

thereto or sequences which hybridize under stringent conditions to all or a portion of SEQ ID Nos. 1-850. For instance, the present invention also provides a probe/primer comprising a substantially purified oligonucleotide, which oligonucleotide comprising a nucleotide sequence that hybridizes under stringent conditions to at least

5 approximately 12, preferably 25, more preferably 40, 50, or 75 consecutive nucleotides up to the full length of the sense or anti-sense sequence selected from the group consisting of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, or naturally occurring mutants thereof. For instance, primers based on a nucleic acid represented

10 in SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, can be used in PCR reactions to clone homologs of that sequence.

In yet another embodiment, the invention provides probes/primers comprising a nucleotide sequence that hybridizes under moderately stringent conditions to at least

15 approximately 12, 16, 25, 40, 50 or 75 consecutive nucleotides up to the full length of the sense or antisense sequence selected from the group consisting of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or naturally occurring mutants thereof.

In particular, these probes are useful because they provide a method for

20 detecting mutations in wild-type genes of the present invention. Nucleic acid probes which are complementary to a wild-type gene of the present invention and can form mismatches with mutant genes are provided, allowing for detection by enzymatic or chemical cleavage or by shifts in electrophoretic mobility.

Likewise, probes based on the subject sequences can be used to detect

25 transcripts or genomic sequences encoding the same or homologous proteins, for use, for example, in prognostic or diagnostic assays. In preferred embodiments, the probe further comprises a label group attached thereto and able to be detected, e.g., the label group is selected from radioisotopes, fluorescent compounds, chemiluminescent compounds, enzymes, and enzyme co-factors.

30 Full-length cDNA molecules comprising the disclosed nucleic acids are obtained as follows. A subject nucleic acid or a portion thereof comprising at least about 12, 15, 18, or 20 nucleotides up to the full length of a sequence represented in



SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, may be used as a hybridization probe to detect hybridizing members of a cDNA library using probe design methods, cloning methods, and clone selection techniques as described in U.S. Patent No. 5,654,173, "Secreted Proteins and Polynucleotides Encoding Them," incorporated herein by reference. Libraries of cDNA may be made from selected tissues, such as normal or tumor tissue, or from tissues of a mammal treated with, for example, a pharmaceutical agent. Preferably, the tissue is the same as that used to generate the nucleic acids, as both the nucleic acid and the cDNA represent expressed genes. Most preferably, the cDNA library is made from the biological material described herein in the Examples. Alternatively, many cDNA libraries are available commercially. (Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, 2nd Ed. (Cold Spring Harbor Press, Cold Spring Harbor, NY 1989). The choice of cell type for library construction may be made after the identity of the protein encoded by the nucleic acid-related gene is known. This will indicate which tissue and cell types are likely to express the related gene, thereby containing the mRNA for generating the cDNA.

Members of the library that are larger than the nucleic acid, and preferably that contain the whole sequence of the native message, may be obtained. To confirm that the entire cDNA has been obtained, RNA protection experiments may be performed as follows. Hybridization of a full-length cDNA to an mRNA may protect the RNA from RNase degradation. If the cDNA is not full length, then the portions of the mRNA that are not hybridized may be subject to RNase degradation. This may be assayed, as is known in the art, by changes in electrophoretic mobility on polyacrylamide gels, or by detection of released monoribonucleotides. Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, 2nd Ed. (Cold Spring Harbor Press, Cold Spring Harbor, NY 1989). In order to obtain additional sequences 5' to the end of a partial cDNA, 5' RACE (PCR Protocols: A Guide to Methods and Applications (Academic Press, Inc. 1990)) may be performed.

Genomic DNA may be isolated using nucleic acids in a manner similar to the isolation of full-length cDNAs. Briefly, the nucleic acids, or portions thereof, may be used as probes to libraries of genomic DNA. Preferably, the library is obtained from the cell type that was used to generate the nucleic acids. Most preferably, the genomic

DNA is obtained from the biological material described herein in the Example. Such libraries may be in vectors suitable for carrying large segments of a genome, such as P1 or YAC, as described in detail in Sambrook *et al.*, 9.4-9.30. In addition, genomic sequences can be isolated from human BAC libraries, which are commercially  
5 available from Research Genetics, Inc., Huntsville, Alabama, USA, for example. In order to obtain additional 5' or 3' sequences, chromosome walking may be performed, as described in Sambrook *et al.*, such that adjacent and overlapping fragments of genomic DNA are isolated. These may be mapped and pieced together, as is known in the art, using restriction digestion enzymes and DNA ligase.

10 Using the nucleic acids of the invention, corresponding full length genes can be isolated using both classical and PCR methods to construct and probe cDNA libraries. Using either method, Northern blots, preferably, may be performed on a number of cell types to determine which cell lines express the gene of interest at the highest rate.

15 Classical methods of constructing cDNA libraries are taught in Sambrook *et al.*, supra. With these methods, cDNA can be produced from mRNA and inserted into viral or expression vectors. Typically, libraries of mRNA comprising poly(A) tails can be produced with poly(T) primers. Similarly, cDNA libraries can be produced using the instant sequences as primers.

20 PCR methods may be used to amplify the members of a cDNA library that comprise the desired insert. In this case, the desired insert may contain sequence from the full length cDNA that corresponds to the instant nucleic acids. Such PCR methods include gene trapping and RACE methods.

Gene trapping may entail inserting a member of a cDNA library into a vector.  
25 The vector then may be denatured to produce single stranded molecules. Next, a substrate-bound probe, such a biotinylated oligo, may be used to trap cDNA inserts of interest. Biotinylated probes can be linked to an avidin-bound solid substrate. PCR methods can be used to amplify the trapped cDNA. To trap sequences corresponding to the full length genes, the labeled probe sequence may be based on the nucleic acids  
30 of the invention, e.g., SEQ ID Nos. 1-383, preferably SEQ ID Nos. 1-127, or a sequence complementary thereto. Random primers or primers specific to the library vector can be used to amplify the trapped cDNA. Such gene trapping techniques are

described in Gruber *et al.*, PCT WO 95/04745 and Gruber *et al.*, U.S. Pat. No. 5,500,356. Kits are commercially available to perform gene trapping experiments from, for example, Life Technologies, Gaithersburg, Maryland, USA.

“Rapid amplification of cDNA ends,” or RACE, is a PCR method of  
5 amplifying cDNAs from a number of different RNAs. The cDNAs may be ligated to an oligonucleotide linker and amplified by PCR using two primers. One primer may be based on sequence from the instant nucleic acids, for which full length sequence is desired, and a second primer may comprise a sequence that hybridizes to the oligonucleotide linker to amplify the cDNA. A description of this method is reported  
10 in PCT Pub. No. WO 97/19110.

In preferred embodiments of RACE, a common primer may be designed to anneal to an arbitrary adaptor sequence ligated to cDNA ends (Apte and Siebert, Biotechniques 15:890-893, 1993; Edwards *et al.*, Nuc. Acids Res. 19:5227-5232, 1991). When a single gene-specific RACE primer is paired with the common primer,  
15 preferential amplification of sequences between the single gene specific primer and the common primer occurs. Commercial cDNA pools modified for use in RACE are available.

Another PCR-based method generates full-length cDNA library with anchored ends without specific knowledge of the cDNA sequence. The method uses lock-  
20 docking primers (I-VI), where one primer, poly TV (I-III) locks over the polyA tail of eukaryotic mRNA producing first strand synthesis and a second primer, polyGH (IV-VI) locks onto the polyC tail added by terminal deoxynucleotidyl transferase (TdT). This method is described in PCT Pub. No. WO 96/40998.

The promoter region of a gene generally is located 5' to the initiation site for  
25 RNA polymerase II. Hundreds of promoter regions contain the “TATA” box, a sequence such as TATTA or TATAA, which is sensitive to mutations. The promoter region can be obtained by performing 5' RACE using a primer from the coding region of the gene. Alternatively, the cDNA can be used as a probe for the genomic sequence, and the region 5' to the coding region is identified by “walking up.”

30 If the gene is highly expressed or differentially expressed, the promoter from the gene may be of use in a regulatory construct for a heterologous gene.

Once the full-length cDNA or gene is obtained, DNA encoding variants can be prepared by site-directed mutagenesis, described in detail in Sambrook *et al.*, 15.3-15.63. The choice of codon or nucleotide to be replaced can be based on the disclosure herein on optional changes in amino acids to achieve altered protein structure and/or function.

As an alternative method to obtaining DNA or RNA from a biological material, nucleic acid comprising nucleotides having the sequence of one or more nucleic acids of the invention can be synthesized. Thus, the invention encompasses nucleic acid molecules ranging in length from 12 nucleotides (corresponding to at least 12 contiguous nucleotides which hybridize under stringent conditions to or are at least 80% identical to a nucleic acid represented by one of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto) up to a maximum length suitable for one or more biological manipulations, including replication and expression, of the nucleic acid molecule. The invention includes but is not limited to (a) nucleic acid having the size of a full gene, and comprising at least one of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto; (b) the nucleic acid of (a) also comprising at least one additional gene, operably linked to permit expression of a fusion protein; (c) an expression vector comprising (a) or (b); (d) a plasmid comprising (a) or (b); and (e) a recombinant viral particle comprising (a) or (b). Construction of (a) can be accomplished as described below in part IV.

The sequence of a nucleic acid of the present invention is not limited and can be any sequence of A, T, G, and/or C (for DNA) and A, U, G, and/or C (for RNA) or modified bases thereof, including inosine and pseudouridine. The choice of sequence will depend on the desired function and can be dictated by coding regions desired, the intron-like regions desired, and the regulatory regions desired.

#### VI. Vectors Carrying Nucleic Acids of the Present Invention

The invention further provides plasmids and vectors, which can be used to express a gene in a host cell. The host cell may be any prokaryotic or eukaryotic cell. Thus, a nucleotide sequence derived from any one of SEQ ID Nos. 1-850, preferably

SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, encoding all or a selected portion of a protein, can be used to produce a recombinant form of a polypeptide via microbial or eukaryotic cellular processes. Ligating the polynucleotide sequence into a gene construct, such as an expression vector, and transforming or transfecting into hosts, either eukaryotic (yeast, avian, insect or mammalian) or prokaryotic (bacterial cells), are standard procedures well known in the art.

Vectors that allow expression of a nucleic acid in a cell are referred to as expression vectors. Typically, expression vectors contain a nucleic acid operably linked to at least one transcriptional regulatory sequence. Regulatory sequences are art-recognized and are selected to direct expression of the subject nucleic acids. Transcriptional regulatory sequences are described in Goeddel; Gene Expression Technology: Methods in Enzymology 185, Academic Press, San Diego, CA (1990). In one embodiment, the expression vector includes a recombinant gene encoding a peptide having an agonistic activity of a subject polypeptide, or alternatively, encoding a peptide which is an antagonistic form of a subject polypeptide.

The choice of plasmid will depend on the type of cell in which propagation is desired and the purpose of propagation. Certain vectors are useful for amplifying and making large amounts of the desired DNA sequence. Other vectors are suitable for expression in cells in culture. Still other vectors are suitable for transfer and expression in cells in a whole animal or person. The choice of appropriate vector is well within the skill of the art. Many such vectors are available commercially. The nucleic acid or full-length gene is inserted into a vector typically by means of DNA ligase attachment to a cleaved restriction enzyme site in the vector. Alternatively, the desired nucleotide sequence may be inserted by homologous recombination *in vivo*. Typically this is accomplished by attaching regions of homology to the vector on the flanks of the desired nucleotide sequence. Regions of homology are added by ligation of oligonucleotides, or by polymerase chain reaction using primers comprising both the region of homology and a portion of the desired nucleotide sequence, for example.

Nucleic acids or full-length genes are linked to regulatory sequences as appropriate to obtain the desired expression properties. These may include promoters (attached either at the 5' end of the sense strand or at the 3' end of the antisense

strand), enhancers, terminators, operators, repressors, and inducers. The promoters may be regulated or constitutive. In some situations it may be desirable to use conditionally active promoters, such as tissue-specific or developmental stage-specific promoters. These are linked to the desired nucleotide sequence using the techniques  
5 described above for linkage to vectors. Any techniques known in the art may be used.

When any of the above host cells, or other appropriate host cells or organisms, are used to replicate and/or express the polynucleotides or nucleic acids of the invention, the resulting replicated nucleic acid, RNA, expressed protein or polypeptide, is within the scope of the invention as a product of the host cell or  
10 organism. The product is recovered by any appropriate means known in the art.

Once the gene corresponding to the nucleic acid is identified, its expression can be regulated in the cell to which the gene is native. For example, an endogenous gene of a cell can be regulated by an exogenous regulatory sequence as disclosed in U.S. Patent No. 5,641,670, "Protein Production and Protein Delivery."

15 A number of vectors exist for the expression of recombinant proteins in yeast (see, for example, Broach *et al.* (1983) in *Experimental Manipulation of Gene Expression*, ed. M. Inouye, Academic Press, p. 83, incorporated by reference herein). In addition, drug resistance markers such as ampicillin can be used. In an illustrative embodiment, a polypeptide is produced recombinantly utilizing an expression vector  
20 generated by sub-cloning one of the nucleic acids represented in one of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto.

The preferred mammalian expression vectors contain both prokaryotic sequences, to facilitate the propagation of the vector in bacteria, and one or more  
25 eukaryotic transcription units that are expressed in eukaryotic cells. The various methods employed in the preparation of plasmids and transformation of host organisms are well known in the art. For other suitable expression systems for both prokaryotic and eukaryotic cells, as well as general recombinant procedures, see *Molecular Cloning: A Laboratory Manual*, 2<sup>nd</sup> Ed., ed. by Sambrook, Fritsch and  
30 Maniatis (Cold Spring Harbor Laboratory Press: 1989) Chapters 16 and 17. When it is desirable to express only a portion of a gene, e.g., a truncation mutant, it may be necessary to add a start codon (ATG) to the oligonucleotide fragment

containing the desired sequence to be expressed. It is well known in the art that a methionine at the N-terminal position can be enzymatically cleaved by the use of the enzyme methionine aminopeptidase (MAP). MAP has been cloned from *E. coli* (Ben-Bassat *et al.* (1987) *J. Bacteriol.* 169:751-757) and *Salmonella typhimurium* and its *in vitro* activity has been demonstrated on recombinant proteins (Miller *et al.* (1987) *PNAS* 84:2718-1722). Therefore, removal of an N-terminal methionine, if desired, can be achieved either *in vivo* by expressing polypeptides in a host which produces MAP (e.g., *E. coli* or CM89 or *S. cerevisiae*), or *in vitro* by use of purified MAP (e.g., procedure of Miller *et al.*, *supra*).

Moreover, the nucleic acid constructs of the present invention can also be used as part of a gene therapy protocol to deliver nucleic acids such as antisense nucleic acids. Thus, another aspect of the invention features expression vectors for *in vivo* or *in vitro* transfection with an antisense oligonucleotide.

In addition to viral transfer methods, non-viral methods can also be employed to introduce a subject nucleic acid, e.g., a sequence represented by one of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, into the tissue of an animal. Most nonviral methods of gene transfer rely on normal mechanisms used by mammalian cells for the uptake and intracellular transport of macromolecules. In preferred embodiments, non-viral targeting means of the present invention rely on endocytic pathways for the uptake of the subject nucleic acid by the targeted cell. Exemplary targeting means of this type include liposomal derived systems, polylysine conjugates, and artificial viral envelopes.

A nucleic acid of any of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, the corresponding cDNA, or the full-length gene may be used to express the partial or complete gene product. Appropriate nucleic acid constructs are purified using standard recombinant DNA techniques as described in, for example, Sambrook *et al.*, (1989) *Molecular Cloning: A Laboratory Manual*, 2nd ed. (Cold Spring Harbor Press, Cold Spring Harbor, New York), and under current regulations described in United States Dept. of HHS, National Institute of Health (NIH) Guidelines for Recombinant DNA Research. The polypeptides encoded by the nucleic acid may be expressed in

any expression system, including, for example, bacterial, yeast, insect, amphibian and mammalian systems. Suitable vectors and host cells are described in U.S. Patent No. 5,654,173.

Bacteria. Expression systems in bacteria include those described in Chang *et al.*, *Nature* (1978) 275:615, Goeddel *et al.*, *Nature* (1979) 281:544, Goeddel *et al.*, *Nucleic Acids Res.* (1980) 8:4057; EP 0 036,776, U.S. Patent No. 4,551,433, DeBoer *et al.*, *Proc. Natl. Acad. Sci. (USA)* (1983) 80:2125, and Siebenlist *et al.*, *Cell* (1980) 20:269.

Yeast. Expression systems in yeast include those described in Hinnen *et al.*, *Proc. Natl. Acad. Sci. (USA)* (1978) 75:1929; Ito *et al.*, *J. Bacteriol.* (1983) 153:163; Kurtz *et al.*, *Mol. Cell. Biol.* (1986) 6:142; Kunze *et al.*, *J. Basic Microbiol.* (1985) 25:141; Gleeson *et al.*, *J. Gen. Microbiol.* (1986) 132:3459, Roggenkamp *et al.*, *Mol. Gen. Genet.* (1986) 202:302; Das *et al.*, *J. Bacteriol.* (1984) 158:1165; De Louvencourt *et al.*, *J. Bacteriol.* (1983) 154:737, Van den Berg *et al.*, *Bio/Technology* (1990) 8:135; Kunze *et al.*, *J. Basic Microbiol.* (1985) 25:141; Cregg *et al.*, *Mol. Cell. Biol.* (1985) 5:3376, U.S. Patent Nos. 4,837,148 and 4,929,555; Beach and Nurse, *Nature* (1981) 300:706; Davidow *et al.*, *Curr. Genet.* (1985) 10:380, Gaillardin *et al.*, *Curr. Genet.* (1985) 10:49, Ballance *et al.*, *Biochem. Biophys. Res. Commun.* (1983) 112:284289; Tilburn *et al.*, *Gene* (1983) 26:205221, Yelton *et al.*, *Proc. Natl. Acad. Sci. (USA)* (1984) 81:14701474, Kelly and Hynes, *EMBO J.* (1985) 4:475479; EP 0 244,234, and WO 91/00357.

Insect Cells. Expression of heterologous genes in insects is accomplished as described in U.S. Patent No. 4,745,051, Friesen *et al.* (1986) "The Regulation of Baculovirus Gene Expression" in: *The Molecular Biology Of Baculoviruses* (W. Doerfler, ed.), EP 0 127,839, EP 0 155,476, and Vlak *et al.*, *J. Gen. Virol.* (1988) 69:765776, Miller *et al.*, *Ann. Rev. Microbiol.* (1988) 42:177, Carbonell *et al.*, *Gene* (1988) 73:409, Maeda *et al.*, *Nature* (1985) 315:592594, Lebacqz-Verheyden *et al.*, *Mol. Cell. Biol.* (1988) 8:3129; Smith *et al.*, *Proc. Natl. Acad. Sci. (USA)* (1985) 82:8404, Miyajima *et al.*, *Gene* (1987) 58:273; and Martin *et al.*, *DNA* (1988) 7:99.

Numerous baculoviral strains and variants and corresponding permissive insect host cells from hosts are described in Luckow *et al.*, *Bio/Technology* (1988) 6:4755, Miller



*et al.*, Generic Engineering (Setlow, J.K. *et al.* eds.), Vol. 8 (Plenum Publishing, 1986), pp. 277279, and Maeda *et al.*, *Nature*, (1985) 315:592-594.

Mammalian Cells. Mammalian expression is accomplished as described in Dijkema *et al.*, *EMBO J.* (1985) 4:761, Gorman *et al.*, *Proc. Natl. Acad. Sci. (USA)* 5 (1982) 79:6777, Boshart *et al.*, *Cell* (1985) 41:521 and U.S. Patent No. 4,399,216. Other features of mammalian expression are facilitated as described in Ham and Wallace, *Meth. Enz.* (1979) 58:44, Barnes and Sato, *Anal. Biochem.* (1980) 102:255, U.S. Patent Nos. 4,767,704, 4,657,866, 4,927,762, 4,560,655, WO 90/103430, WO 87/00195, and U.S. RE 30,985.

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#### VII. Therapeutic Nucleic Acid Constructs

One aspect of the invention relates to the use of the isolated nucleic acid, e.g., SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, in antisense therapy. As used 15 herein, antisense therapy refers to administration or *in situ* generation of oligonucleotide molecules or their derivatives which specifically hybridize (e.g., bind) under cellular conditions with the cellular mRNA and/or genomic DNA, thereby inhibiting transcription and/or translation of that gene. The binding may be by conventional base pair complementarity, or, for example, in the case of binding to 20 DNA duplexes, through specific interactions in the major groove of the double helix. In general, antisense therapy refers to the range of techniques generally employed in the art, and includes any therapy which relies on specific binding to oligonucleotide sequences.

An antisense construct of the present invention can be delivered, for example, 25 as an expression plasmid which, when transcribed in the cell, produces RNA which is complementary to at least a unique portion of the cellular mRNA. Alternatively, the antisense construct is an oligonucleotide probe which is generated *ex vivo* and which, when introduced into the cell, causes inhibition of expression by hybridizing with the mRNA and/or genomic sequences of a subject nucleic acid. Such oligonucleotide 30 probes are preferably modified oligonucleotides which are resistant to endogenous nucleases, e.g., exonucleases and/or endonucleases, and are therefore stable *in vivo*. Exemplary nucleic acid molecules for use as antisense oligonucleotides are

phosphoramidate, phosphorothioate and methylphosphonate analogs of DNA (see also U.S. Patents 5,176,996; 5,264,564; and 5,256,775). Additionally, general approaches to constructing oligomers useful in antisense therapy have been reviewed, for example, by Van der Krol et al. (1988) *BioTechniques* 6:958-976; and Stein et al.

- 5 (1988) *Cancer Res* 48:2659-2668. With respect to antisense DNA, oligodeoxyribonucleotides derived from the translation initiation site, e.g., between the -10 and +10 regions of the nucleotide sequence of interest, are preferred.

Antisense approaches involve the design of oligonucleotides (either DNA or RNA) that are complementary to mRNA. The antisense oligonucleotides will bind to  
10 the mRNA transcripts and prevent translation. Absolute complementarity, although preferred, is not required. In the case of double-stranded antisense nucleic acids, a single strand of the duplex DNA may thus be tested, or triplex formation may be assayed. The ability to hybridize will depend on both the degree of complementarity and the length of the antisense nucleic acid. Generally, the longer the hybridizing  
15 nucleic acid, the more base mismatches with an RNA it may contain and still form a stable duplex (or triplex, as the case may be). One skilled in the art can ascertain a tolerable degree of mismatch by use of standard procedures to determine the melting point of the hybridized complex.

- Oligonucleotides that are complementary to the 5' end of the mRNA, e.g., the  
20 5' untranslated sequence up to and including the AUG initiation codon, should work most efficiently at inhibiting translation. However, sequences complementary to the 3' untranslated sequences of mRNAs have recently been shown to be effective at inhibiting translation of mRNAs as well. (Wagner, R. 1994. *Nature* 372:333). Therefore, oligonucleotides complementary to either the 5' or 3' untranslated, non-  
25 coding regions of a gene could be used in an antisense approach to inhibit translation of endogenous mRNA. Oligonucleotides complementary to the 5' untranslated region of the mRNA should include the complement of the AUG start codon. Antisense oligonucleotides complementary to mRNA coding regions are typically less efficient inhibitors of translation but could also be used in accordance with the invention.
- 30 Whether designed to hybridize to the 5', 3', or coding region of subject mRNA, antisense nucleic acids should be at least six nucleotides in length, and are preferably

less than about 100 and more preferably less than about 50, 25, 17 or 10 nucleotides in length.

Regardless of the choice of target sequence, it is preferred that *in vitro* studies are first performed to quantitate the ability of the antisense oligonucleotide to

5 quantitate the ability of the antisense oligonucleotide to inhibit gene expression. It is preferred that these studies utilize controls that distinguish between antisense gene inhibition and nonspecific biological effects of oligonucleotides. It is also preferred that these studies compare levels of the target RNA or protein with that of an internal control RNA or protein. Additionally, it is envisioned that results obtained using the

10 antisense oligonucleotide are compared with those obtained using a control oligonucleotide. It is preferred that the control oligonucleotide is of approximately the same length as the test oligonucleotide and that the nucleotide sequence of the oligonucleotide differs from the antisense sequence no more than is necessary to prevent specific hybridization to the target sequence.

15 The oligonucleotides can be DNA or RNA or chimeric mixtures or derivatives or modified versions thereof, single-stranded or double-stranded. The oligonucleotide can be modified at the base moiety, sugar moiety, or phosphate backbone, for example, to improve stability of the molecule, hybridization, etc. The oligonucleotide may include other appended groups such as peptides (e.g., for targeting host cell

20 receptors), or agents facilitating transport across the cell membrane (see, e.g., Letsinger et al., 1989, Proc. Natl. Acad. Sci. U.S.A. 86:6553-6556; Lemaitre et al., 1987, Proc. Natl. Acad. Sci. 84:648-652; PCT Publication No. WO 88/09810, published December 15, 1988) or the blood-brain barrier (see, e.g., PCT Publication No. WO 89/10134, published April 25, 1988), hybridization-triggered cleavage agents

25 (See, e.g., Krol et al., 1988, BioTechniques 6:958-976), or intercalating agents (See, e.g., Zon, 1988, Pharm. Res. 5:539-549). To this end, the oligonucleotide may be conjugated to another molecule, e.g., a peptide, hybridization triggered cross-linking agent, transport agent, hybridization-triggered cleavage agent, etc.

The antisense oligonucleotide may comprise at least one modified base moiety

30 which is selected from the group including but not limited to 5-fluorouracil, 5-bromouracil, 5-chlorouracil, 5-iodouracil, hypoxanthine, xantine, 4-acetylcytosine, 5-(carboxyhydroxytriethyl) uracil, 5-carboxymethylaminomethyl-2-thiouridine, 5-

carboxymethylaminomethyluracil, dihydrouracil, beta-D-galactosylqueosine, inosine, N6-isopentenyladenine, 1-methylguanine, 1-methylinosine, 2,2-dimethylguanine, 2-methyladenine, 2-methylguanine, 3-methylcytosine, 5-methylcytosine, N6-adenine, 7-methylguanine, 5-methylaminomethyluracil, 5-methoxyaminomethyl-2-thiouracil, 5 beta-D-mannosylqueosine, 5'-methoxycarboxymethyluracil, 5-methoxyuracil, 2-methylthio-N6-isopentenyladenine, uracil-5-oxyacetic acid (v), wybutoxosine, pseudouracil, queosine, 2-thiocytosine, 5-methyl-2-thiouracil, 2-thiouracil, 4-thiouracil, 5-methyluracil, uracil-5-oxyacetic acid methylester, uracil-5-oxyacetic acid (v), 5-methyl-2-thiouracil, 3-(3-amino-3-N-2-carboxypropyl) uracil, (acp3)w, and 2,6-diaminopurine.

The antisense oligonucleotide may also comprise at least one modified sugar moiety selected from the group including but not limited to arabinose, 2-fluoroarabinose, xylulose, and hexose.

The antisense oligonucleotide can also contain a neutral peptide-like backbone. Such molecules are termed peptide nucleic acid (PNA)-oligomers and are described, e.g., in Perry-O'Keefe et al. (1996) Proc. Natl. Acad. Sci. U.S.A. 93:14670 and in Eglom *et al.* (1993) Nature 365:566. One advantage of PNA oligomers is their capability to bind to complementary DNA essentially independently from the ionic strength of the medium due to the neutral backbone of the DNA. In yet another embodiment, the antisense oligonucleotide comprises at least one modified phosphate backbone selected from the group consisting of a phosphorothioate, a phosphorodithioate, a phosphoramidothioate, a phosphoramidate, a phosphordiamidate, a methylphosphonate, an alkyl phosphotriester, and a formacetal or analog thereof.

In yet a further embodiment, the antisense oligonucleotide is an  $\alpha$ -anomeric oligonucleotide. An  $\alpha$ -anomeric oligonucleotide forms specific double-stranded hybrids with complementary RNA in which, contrary to the usual  $\beta$ -units, the strands run parallel to each other (Gautier et al., 1987, Nucl. Acids Res. 15:6625-6641). The oligonucleotide is a 2'-O-methylribonucleotide (Inoue et al., 1987, Nucl. Acids Res. 15:6131-12148), or a chimeric RNA-DNA analogue (Inoue et al., 1987, FEBS Lett. 215:327-330).

Oligonucleotides of the invention may be synthesized by standard methods known in the art, e.g., by use of an automated DNA synthesizer (such as are commercially available from Biosearch, Applied Biosystems, etc.). As examples, phosphorothioate oligonucleotides may be synthesized by the method of Stein et al. (1988, Nucl. Acids Res. 16:3209), methylphosphonate oligonucleotides can be prepared by use of controlled pore glass polymer supports (Sarin et al., 1988, Proc. Natl. Acad. Sci. U.S.A. 85:7448-7451), etc.

While antisense nucleotides complementary to a coding region sequence can be used, those complementary to the transcribed untranslated region and to the region comprising the initiating methionine are most preferred.

The antisense molecules can be delivered to cells which express the target nucleic acid *in vivo*. A number of methods have been developed for delivering antisense DNA or RNA to cells; e.g., antisense molecules can be injected directly into the tissue site, or modified antisense molecules, designed to target the desired cells (e.g., antisense linked to peptides or antibodies that specifically bind receptors or antigens expressed on the target cell surface) can be administered systemically.

However, it is often difficult to achieve intracellular concentrations of the antisense sufficient to suppress translation on endogenous mRNAs. Therefore, a preferred approach utilizes a recombinant DNA construct in which the antisense oligonucleotide is placed under the control of a strong pol III or pol II promoter. The use of such a construct to transfect target cells in the patient will result in the transcription of sufficient amounts of single stranded RNAs that will form complementary base pairs with the endogenous transcripts and thereby prevent translation of the target mRNA. For example, a vector can be introduced *in vivo* such that it is taken up by a cell and directs the transcription of an antisense RNA. Such a vector can remain episomal or become chromosomally integrated, as long as it can be transcribed to produce the desired antisense RNA. Such vectors can be constructed by recombinant DNA technology methods standard in the art. Vectors can be plasmid, viral, or others known in the art for replication and expression in mammalian cells. Expression of the sequence encoding the antisense RNA can be by any promoter known in the art to act in mammalian, preferably human cells. Such promoters can be inducible or constitutive. Such promoters include but are not limited to: the SV40

early promoter region (Bernoist and Chambon, 1981, Nature 290:304-310), the promoter contained in the 3' long terminal repeat of Rous sarcoma virus (Yamamoto *et al.*, 1980, Cell 22:787-797), the herpes thymidine kinase promoter (Wagner *et al.*, 1981, Proc. Natl. Acad. Sci. U.S.A. 78:1441-1445), the regulatory sequences of the metallothionein gene (Brinster *et al.*, 1982, Nature 296:39-42), etc. Any type of plasmid, cosmid, YAC or viral vector can be used to prepare the recombinant DNA construct which can be introduced directly into the tissue site; e.g., the choroid plexus or hypothalamus. Alternatively, viral vectors can be used which selectively infect the desired tissue (e.g., for brain, herpesvirus vectors may be used), in which case administration may be accomplished by another route (e.g., systemically).

In another aspect of the invention, ribozyme molecules designed to catalytically cleave target mRNA transcripts can be used to prevent translation of target mRNA and expression of a target protein (See, e.g., PCT International Publication WO90/11364, published October 4, 1990; Sarver *et al.*, 1990, Science 247:1222-1225 and U.S. Patent No. 5,093,246). While ribozymes that cleave mRNA at site specific recognition sequences can be used to destroy target mRNAs, the use of hammerhead ribozymes is preferred. Hammerhead ribozymes cleave mRNAs at locations dictated by flanking regions that form complementary base pairs with the target mRNA. The sole requirement is that the target mRNA have the following sequence of two bases: 5'-UG-3'. The construction and production of hammerhead ribozymes is well known in the art and is described more fully in Haseloff and Gerlach, 1988, Nature, 334:585-591. Preferably the ribozyme is engineered so that the cleavage recognition site is located near the 5' end of the target mRNA; i.e., to increase efficiency and minimize the intracellular accumulation of non-functional mRNA transcripts.

The ribozymes of the present invention also include RNA endoribonucleases (hereinafter "Cech-type ribozymes") such as the one which occurs naturally in *Tetrahymena thermophila* (known as the IVS, or L-19 IVS RNA) and which has been extensively described by Thomas Cech and collaborators (Zaug, *et al.*, 1984, Science, 224:574-578; Zaug and Cech, 1986, Science, 231:470-475; Zaug, *et al.*, 1986, Nature, 324:429-433; published International patent application No. WO88/04300 by University Patents Inc.; Been and Cech, 1986, Cell, 47:207-216). The Cech-type

ribozymes have an eight base pair active site which hybridizes to a target RNA sequence whereafter cleavage of the target RNA takes place. The invention encompasses those Cech-type ribozymes which target eight base-pair active site sequences that are present in a target gene.

5           As in the antisense approach, the ribozymes can be composed of modified oligonucleotides (e.g., for improved stability, targeting, etc.) and should be delivered to cells which express the target gene *in vivo*. A preferred method of delivery involves using a DNA construct "encoding" the ribozyme under the control of a strong constitutive pol III or pol II promoter, so that transfected cells will produce  
10       sufficient quantities of the ribozyme to destroy endogenous messages and inhibit translation. Because ribozymes, unlike antisense molecules, are catalytic, a lower intracellular concentration is required for efficiency.

          Antisense RNA, DNA, and ribozyme molecules of the invention may be prepared by any method known in the art for the synthesis of DNA and RNA  
15       molecules. These include techniques for chemically synthesizing oligodeoxyribonucleotides and oligoribonucleotides well known in the art such as for example solid phase phosphoramidite chemical synthesis. Alternatively, RNA molecules may be generated by *in vitro* and *in vivo* transcription of DNA sequences encoding the antisense RNA molecule. Such DNA sequences may be incorporated  
20       into a wide variety of vectors which incorporate suitable RNA polymerase promoters such as the T7 or SP6 polymerase promoters. Alternatively, antisense cDNA constructs that synthesize antisense RNA constitutively or inducibly, depending on the promoter used, can be introduced stably into cell lines.

          Moreover, various well-known modifications to nucleic acid molecules may  
25       be introduced as a means of increasing intracellular stability and half-life. Possible modifications include but are not limited to the addition of flanking sequences of ribonucleotides or deoxyribonucleotides to the 5' and/or 3' ends of the molecule or the use of phosphorothioate or 2' O-methyl rather than phosphodiesterase linkages within the oligodeoxyribonucleotide backbone.

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#### VIII. Polypeptides of the Present Invention

The present invention makes available isolated polypeptides which are isolated from, or otherwise substantially free of other cellular proteins, especially other signal transduction factors and/or transcription factors which may normally be associated with the polypeptide. Subject polypeptides of the present invention include

5 polypeptides encoded by the nucleic acids of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, or polypeptides encoded by genes of which a sequence in SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, is a fragment. Polypeptides of the present invention

10 include those proteins which are differentially regulated in tumor cells, especially colon cancer-derived cell lines (relative to normal cells, e.g., normal colon tissue and non-colon tissue). In preferred embodiments, the polypeptides are upregulated in tumor cells, especially colon cancer cancer-derived cell lines. In other embodiments, the polypeptides are downregulated in tumor cells, especially colon cancer-derived

15 cell lines. Proteins which are upregulated, such as oncogenes, or downregulated, such as tumor suppressors, in aberrantly proliferating cells may be targets for diagnostic or therapeutic techniques. For example, upregulation of the *cdc2* gene induces mitosis. Overexpression of the *myt1* gene, a mitotic deactivator, negatively regulates the activity of *cdc2*. Aberrant proliferation may thus be induced either by upregulating

20 *cdc2* or by downregulating *myt1*

The term "substantially free of other cellular proteins" (also referred to herein as "contaminating proteins") or "substantially pure or purified preparations" are defined as encompassing preparations of polypeptides having less than about 20% (by dry weight) contaminating protein, and preferably having less than about 5%

25 contaminating protein. Functional forms of the subject polypeptides can be prepared, for the first time, as purified preparations by using a cloned nucleic acid as described herein. Full length proteins or fragments corresponding to one or more particular motifs and/or domains or to arbitrary sizes, for example, at least about 5, 10, 25, 50, 75, or 100 amino acids in length are within the scope of the present invention.

30 For example, isolated polypeptides can be encoded by all or a portion of a nucleic acid sequence shown in any of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary



thereto. Isolated peptidyl portions of proteins can be obtained by screening peptides recombinantly produced from the corresponding fragment of the nucleic acid encoding such peptides. In addition, fragments can be chemically synthesized using techniques known in the art such as conventional Merrifield solid phase f-Moc or t-Boc chemistry. For example, a polypeptide of the present invention may be arbitrarily divided into fragments of desired length with no overlap of the fragments, or preferably divided into overlapping fragments of a desired length. The fragments can be produced (recombinantly or by chemical synthesis) and tested to identify those peptidyl fragments which can function as either agonists or antagonists of a wild-type (e.g., "authentic") protein.

Another aspect of the present invention concerns recombinant forms of the subject proteins. Recombinant polypeptides preferred by the present invention, in addition to native proteins as described above are encoded by a nucleic acid, which is at least 60%, more preferably at least 80%, and more preferably 85%, and more preferably 90%, and more preferably 95% identical to an amino acid sequence encoded by SEQ ID NOs. 1-850. Polypeptides which are encoded by a nucleic acid that is at least about 98-99% identical with the sequence of SEQ ID Nos. 1-850 are also within the scope of the invention. Also included in the present invention are peptide fragments comprising at least a portion of such a protein.

In a preferred embodiment, a polypeptide of the present invention is a mammalian polypeptide and even more preferably a human polypeptide. In particularly preferred embodiment, the polypeptide retains wild-type bioactivity. It will be understood that certain post-translational modifications, e.g., phosphorylation and the like, can increase the apparent molecular weight of the polypeptide relative to the unmodified polypeptide chain.

The present invention further pertains to recombinant forms of one of the subject polypeptides. Such recombinant polypeptides preferably are capable of functioning in one of either role of an agonist or antagonist of at least one biological activity of a wild-type ("authentic") polypeptide of the appended sequence listing. The term "evolutionarily related to", with respect to amino acid sequences of proteins, refers to both polypeptides having amino acid sequences which have arisen naturally,

and also to mutational variants of human polypeptides which are derived, for example, by combinatorial mutagenesis.

In general, polypeptides referred to herein as having an activity (e.g., are "bioactive") of a protein are defined as polypeptides which include an amino acid  
5 sequence encoded by all or a portion of the nucleic acid sequences shown in one of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, and which mimic or antagonize all or a portion of the biological/biochemical activities of a naturally occurring protein. According to the present invention, a polypeptide has biological activity if it is a  
10 specific agonist or antagonist of a naturally occurring form of a protein.

Assays for determining whether a compound, e.g., a protein or variant thereof, has one or more of the above biological activities are well known in the art. In certain embodiments, the polypeptides of the present invention have activities such as those outlined above.

In another embodiment, the coding sequences for the polypeptide can be  
15 incorporated as a part of a fusion gene including a nucleotide sequence encoding a different polypeptide. This type of expression system can be useful under conditions where it is desirable to produce an immunogenic fragment of a polypeptide (see, for example, EP Publication No: 0259149; and Evans *et al.* (1989) *Nature* 339:385; Huang *et al.* (1988) *J. Virol.* 62:3855; and Schlienger *et al.* (1992) *J. Virol.* 66:2). In  
20 addition to utilizing fusion proteins to enhance immunogenicity, it is widely appreciated that fusion proteins can also facilitate the expression of proteins, and, accordingly, can be used in the expression of the polypeptides of the present invention (see, for example, *Current Protocols in Molecular Biology*, eds. Ausubel *et al.* (N.Y.: John Wiley & Sons, 1991)). In another embodiment, a fusion gene coding for a  
25 purification leader sequence, such as a poly-(His)/enterokinase cleavage site sequence at the N-terminus of the desired portion of the recombinant protein, can allow purification of the expressed fusion protein by affinity chromatography using a Ni<sup>2+</sup> metal resin. The purification leader sequence can then be subsequently removed by  
30 treatment with enterokinase to provide the purified protein (e.g., see Hochuli *et al.* (1987) *J. Chromatography* 411:177; and Janknecht *et al.* *PNAS* 88:8972).

Techniques for making fusion genes are known to those skilled in the art. Essentially, the joining of various DNA fragments coding for different polypeptide sequences is performed in accordance with conventional techniques, employing blunt-ended or stagger-ended termini for ligation, restriction enzyme digestion to provide  
5 for appropriate termini, filling-in of cohesive ends as appropriate, alkaline phosphatase treatment to avoid undesirable joining, and enzymatic ligation. In another embodiment, the fusion gene can be synthesized by conventional techniques including automated DNA synthesizers. Alternatively, PCR amplification of nucleic acid fragments can be carried out using anchor primers which give rise to complementary  
10 overhangs between two consecutive nucleic acid fragments which can subsequently be annealed to generate a chimeric nucleic acid sequence (see, for example, Current Protocols in Molecular Biology, eds. Ausubel et al. John Wiley & Sons: 1992).

The present invention further pertains to methods of producing the subject polypeptides. For example, a host cell transfected with a nucleic acid vector directing  
15 expression of a nucleotide sequence encoding the subject polypeptides can be cultured under appropriate conditions to allow expression of the peptide to occur. Suitable media for cell culture are well known in the art. The recombinant polypeptide can be isolated from cell culture medium, host cells, or both using techniques known in the art for purifying proteins including ion-exchange chromatography, gel filtration  
20 chromatography, ultrafiltration, electrophoresis, and immunoaffinity purification with antibodies specific for such peptide. In a preferred embodiment, the recombinant polypeptide is a fusion protein containing a domain which facilitates its purification, such as GST fusion protein.

Moreover, it will be generally appreciated that, under certain circumstances, it  
25 may be advantageous to provide homologs of one of the subject polypeptides which function in a limited capacity as one of either an agonist (mimetic) or an antagonist, in order to promote or inhibit only a subset of the biological activities of the naturally occurring form of the protein. Thus, specific biological effects can be elicited by treatment with a homolog of limited function, and with fewer side effects relative to  
30 treatment with agonists or antagonists which are directed to all of the biological activities of naturally occurring forms of subject proteins.

Homologs of each of the subject polypeptide can be generated by mutagenesis, such as by discrete point mutation(s), or by truncation. For instance, mutation can give rise to homologs which retain substantially the same, or merely a subset, of the biological activity of the polypeptide from which it was derived. Alternatively,  
5 antagonistic forms of the polypeptide can be generated which are able to inhibit the function of the naturally occurring form of the protein, such as by competitively binding to a receptor.

The recombinant polypeptides of the present invention also include homologs of the wild-type proteins, such as versions of those proteins which are resistant to  
10 proteolytic cleavage, for example, due to mutations which alter ubiquitination or other enzymatic targeting associated with the protein.

Polypeptides may also be chemically modified to create derivatives by forming covalent or aggregate conjugates with other chemical moieties, such as glycosyl groups, lipids, phosphate, acetyl groups and the like. Covalent derivatives of  
15 proteins can be prepared by linking the chemical moieties to functional groups on amino acid sidechains of the protein or at the N-terminus or at the C-terminus of the polypeptide.

Modification of the structure of the subject polypeptides can be for such purposes as enhancing therapeutic or prophylactic efficacy, stability (e.g., *ex vivo*  
20 shelf life and resistance to proteolytic degradation), or post-translational modifications (e.g., to alter phosphorylation pattern of protein). Such modified peptides, when designed to retain at least one activity of the naturally occurring form of the protein, or to produce specific antagonists thereof, are considered functional equivalents of the polypeptides described in more detail herein. Such modified peptides can be  
25 produced, for instance, by amino acid substitution, deletion, or addition. The substitutional variant may be a substituted conserved amino acid or a substituted non-conserved amino acid.

For example, it is reasonable to expect that an isolated replacement of a leucine with an isoleucine or valine, an aspartate with a glutamate, a threonine with a  
30 serine, or a similar replacement of an amino acid with a structurally related amino acid (i.e., isosteric and/or isoelectric mutations) will not have a major effect on the biological activity of the resulting molecule. Conservative replacements are those that

take place within a family of amino acids that are related in their side chains.

Genetically encoded amino acids can be divided into four families: (1) acidic = aspartate, glutamate; (2) basic = lysine, arginine, histidine; (3) nonpolar = alanine, valine, leucine, isoleucine, proline, phenylalanine, methionine, tryptophan; and (4) 5 uncharged polar = glycine, asparagine, glutamine, cysteine, serine, threonine, tyrosine.

In similar fashion, the amino acid repertoire can be grouped as (1) acidic = aspartate, glutamate; (2) basic = lysine, arginine histidine, (3) aliphatic = glycine, alanine, valine, leucine, isoleucine, serine, threonine, with serine and threonine optionally be grouped separately as aliphatic-hydroxyl; (4) aromatic = phenylalanine, tyrosine, 10 tryptophan; (5) amide = asparagine, glutamine; and (6) sulfur -containing = cysteine and methionine. (see, for example, *Biochemistry*, 2<sup>nd</sup> ed., Ed. by L. Stryer, WH Freeman and Co.: 1981). Whether a change in the amino acid sequence of a peptide results in a functional homolog (e.g., functional in the sense that the resulting polypeptide mimics or antagonizes the wild-type form) can be readily determined by 15 assessing the ability of the variant peptide to produce a response in cells in a fashion similar to the wild-type protein, or competitively inhibit such a response.

Polypeptides in which more than one replacement has taken place can readily be tested in the same manner. The variant may be designed so as to retain biological activity of a particular region of the protein. In a non-limiting example, Osawa et al., 20 1994, *Biochemistry and Molecular International* 34:1003-1009, discusses the actin binding region of a protein from several different species. The actin binding regions of the these species are considered homologous based on the fact that they have amino acids that fall within "homologous residue groups." Homologous residues are judged according to the following groups (using single letter amino acid designations): 25 STAG; ILVMF; HRK; DEQN; and FYW. For example, an S, a T, an A or a G can be in a position and the function (in this case actin binding) is retained.

Additional guidance on amino acid substitution is available from studies of protein evolution. Go et al., 1980, *Int. J. Peptide Protein Res.* 15:211-224, classified amino acid residue sites as interior or exterior depending on their accessibility. More 30 frequent substitution on exterior sites was confirmed to be general in eight sets of homologous protein families regardless of their biological functions and the presence or absence of a prosthetic group. Virtually all types of amino acid residues had higher

mutabilities on the exterior than in the interior. No correlation between mutability and polarity was observed of amino acid residues in the interior and exterior, respectively. Amino acid residues were classified into one of three groups depending on their polarity: polar (Arg, Lys, His, Gln, Asn, Asp, and Glu); weak polar (Ala, Pro, Gly, Thr, and Ser), and nonpolar (Cys, Val, Met, Ile, Leu, Phe, Tyr, and Trp). Amino acid replacements during protein evolution were very conservative: 88% and 76% of them in the interior or exterior, respectively, were within the same group of the three. Inter-group replacements are such that weak polar residues are replaced more often by nonpolar residues in the interior and more often by polar residues on the exterior.

- 10 Querol *et al.*, 1996, *Prot. Eng.* 9:265-271, provides general rules for amino acid substitutions to enhance protein thermostability. New glycosylation sites can be introduced as discussed in Olsen and Thomsen, 1991, *J. Gen. Microbiol.* 137:579-585. An additional disulfide bridge can be introduced, as discussed by Perry and Wetzel, 1984, *Science* 226:555-557; Pantoliano *et al.*, 1987, *Biochemistry* 26:2077-2082;
- 15 Matsumura *et al.*, 1989, *Nature* 342:291-293; Nishikawa *et al.*, 1990, *Protein Eng.* 3:443-448; Takagi *et al.*, 1990, *J. Biol. Chem.* 265:6874-6878; Clarke *et al.*, 1993, *Biochemistry* 32:4322-4329; and Wakarchuk *et al.*, 1994, *Protein Eng.* 7:1379-1386.

- An additional metal binding site can be introduced, according to Toma *et al.*, 1991, *Biochemistry* 30:97-106, and Haezebrouck *et al.*, 1993, *Protein Eng.* 6:643-649. Substitutions with prolines in loops can be made according to Masul *et al.*, 1994, *Appl. Env. Microbiol.* 60:3579-3584; and Hardy *et al.*, *FEBS Lett.* 317:89-92.
- 20

- Cysteine-depleted muteins are considered variants within the scope of the invention. These variants can be constructed according to methods disclosed in U.S. Patent No. 4,959,314, which discloses how to substitute other amino acids for cysteines, and how to determine biological activity and effect of the substitution. Such methods are suitable for proteins according to this invention that have cysteine residues suitable for such substitutions, for example to eliminate disulfide bond formation.
- 25

- To learn the identity and function of the gene that correlates with an nucleic acid, the nucleic acids or corresponding amino acid sequences can be screened against profiles of protein families. Such profiles focus on common structural motifs among
- 30

proteins of each family. Publicly available profiles are described above. Additional or alternative profiles are described below.

In comparing a new nucleic acid with known sequences, several alignment tools are available. Examples include PileUp, which creates a multiple sequence alignment, and is described in Feng *et al.*, *J. Mol. Evol.* (1987) 25:351-360. Another method, GAP, uses the alignment method of Needleman *et al.*, *J. Mol. Biol.* (1970) 48:443-453. GAP is best suited for global alignment of sequences. A third method, BestFit, functions by inserting gaps to maximize the number of matches using the local homology algorithm of Smith and Waterman, *Adv. Appl. Math.* (1981) 2:482-489.

Examples of such profiles are described below.

### Chemokines

Chemokines are a family of proteins that have been implicated in lymphocyte trafficking, inflammatory diseases, angiogenesis, hematopoiesis, and viral infection. See, for example, Rollins, *Blood* (1997) 90(3):909-928, and Wells *et al.*, *J. Leuk. Biol.* (1997) 61:545-550. U.S. Patent No. 5,605,817 discloses DNA encoding a chemokine expressed in fetal spleen. U.S. Patent No. 5,656,724 discloses chemokine-like proteins and methods of use. U.S. Patent No. 5,602,008 discloses DNA encoding a chemokine expressed by liver.

Mutants of the encoded chemokines are polypeptides having an amino acid sequence that possesses at least one amino acid substitution, addition, or deletion as compared to native chemokines. Fragments possess the same amino acid sequence of the native chemokines; mutants may lack the amino and/or carboxyl terminal sequences. Fusions are mutants, fragments, or the native chemokines that also include amino and/or carboxyl terminal amino acid extensions.

The number or type of the amino acid changes is not critical, nor is the length or number of the amino acid deletions, or amino acid extensions that are incorporated in the chemokines as compared to the native chemokine amino acid sequences. A polynucleotide encoding one of these variant polypeptides will retain at least about 80% amino acid identity with at least one known chemokine. Preferably, these polypeptides will retain at least about 85% amino acid sequence identity, more

preferably, at least about 90%; even more preferably, at least about 95%. In addition, the variants will exhibit at least 80%; preferably about 90%; more preferably about 95% of at least one activity exhibited by a native chemokine. Chemokine activity includes immunological, biological, receptor binding, and signal transduction

5 functions of the native chemokine.

Chemotaxis. Assays for chemotaxis relating to neutrophils are described in Walz *et al.*, *Biochem. Biophys. Res. Commun.* (1987) 149:755, Yoshimura *et al.*, *Proc. Natl. Acad. Sci. (USA)* (1987) 84:9233, and Schroder *et al.*, *J. Immunol.* (1987) 139:3474; to lymphocytes, Larsen *et al.*, *Science* (1989) 243:1464, Carr *et al.*, *Proc.*  
10 *Natl. Acad. Sci. (USA)* (1994) 91:3652; to tumor-infiltrating lymphocytes, Liao *et al.*, *J. Exp. Med.* (1995) 182:1301; to hemopoietic progenitors, Aiuti *et al.*, *J. Exp. Med.* (1997) 185:111; to monocytes, Valente *et al.*, *Biochem.* (1988) 27:4162; and to natural killer cells, Loetscher *et al.*, *J. Immunol.* (1996) 156:322, and Allavena *et al.*, *Eur. J. Immunol.* (1994) 24:3233.

15 Assays for determining the biological activity of attracting eosinophils are described in Dahinden *et al.*, *J. Exp. Med.* (1994) 179:751, Weber *et al.*, *J. Immunol.* (1995) 154:4166, and Noso *et al.*, *Biochem. Biophys. Res. Commun.* (1994) 200:1470; for attracting dendritic cells, Sozzani *et al.*, *J. Immunol.* (1995) 155:3292; for attracting basophils, in Dahinden *et al.*, *J. Exp. Med.* (1994) 179:751, Alam *et al.*, *J.*  
20 *Immunol.* (1994) 152:1298, Alam *et al.*, *J. Exp. Med.* (1992) 176:781; and for activating neutrophils, Maghazaci *et al.*, *Eur. J. Immunol.* (1996) 26:315, and Taub *et al.*, *J. Immunol.* (1995) 155:3877. Native chemokines can act as mitogens for fibroblasts, assayed as described in Mullenbach *et al.*, *J. Biol. Chem.* (1986) 261:719.

Receptor Binding. Native chemokines exhibit binding activity with a number  
25 of receptors. Description of such receptors and assays to detect binding are described in, for example, Murphy *et al.*, *Science* (1991) 253:1280; Combadiere *et al.*, *J. Biol. Chem.* (1995) 270:29671; Daugherty *et al.*, *J. Exp. Med.* (1996) 183:2349; Samson *et al.*, *Biochem.* (1996) 35:3362; Raport *et al.*, *J. Biol. Chem.* (1996) 271:17161; Combadiere *et al.*, *J. Leukoc. Biol.* (1996) 60:147; Baba *et al.*, *J. Biol. Chem.* (1997)  
30 23:14893; Yosida *et al.*, *J. Biol. Chem.* (1997) 272:13803; Arvanitakis *et al.*, *Nature* (1997) 385:347, and many other assays are known in the art.



Kinase Activation. Assays for kinase activation are described by Yen *et al.*, *J. Leukoc. Biol.* (1997) 61:529; Dubois *et al.*, *J. Immunol.* (1996) 156:1356; Turner *et al.*, *J. Immunol.* (1995) 155:2437. Assays for inhibition of angiogenesis or cell proliferation are described in Maione *et al.*, *Science* (1990) 247:77.

- 5 Glycosaminoglycan production can be induced by native chemokines, assayed as described in Castor *et al.*, *Proc. Natl. Acad. Sci. (USA)* (1983) 80:765. Chemokine-mediated histamine release from basophils is assayed as described in Dahinden *et al.*, *J. Exp. Med.* (1989) 170:1787; and White *et al.*, *Immunol. Lett.* (1989) 22:151. Heparin binding is described in Luster *et al.*, *J. Exp. Med.* (1995) 182:219.

- 10 Dimerization Activity. Chemokines can possess dimerization activity, which can be assayed according to Burrows *et al.*, *Biochem.* (1994) 33:12741; and Zhang *et al.*, *Mol. Cell. Biol.* (1995) 15:4851. Native chemokines can play a role in the inflammatory response of viruses. This activity can be assayed as described in Bleul *et al.*, *Nature* (1996) 382:829; and Oberlin *et al.*, *Nature* (1996) 382:833. Exocytosis  
15 of monocytes can be promoted by native chemokines. The assay for such activity is described in Ugucioni *et al.*, *Eur. J. Immunol.* (1995) 25:64. Native chemokines also can inhibit hemapoietic stem cell proliferation. The method for testing for such activity is reported in Graham *et al.*, *Nature* (1990) 344:442.

## 20 Death Domain Proteins

- Several protein families contain death domain motifs (Feinstein and Kimchi, *TIBS Letters* (1995) 20:242-244). Some death domain-containing proteins are implicated in cytotoxic intracellular signaling (Cleveland and Ihle, *Cell* (1995) 81:479-482, Pan *et al.*, *Science* (1997) 276:111-113, Duan and Dixit, *Nature* (1997)  
25 385:86-89, and Chinnaiyan *et al.*, *Science* (1996) 274:990-992). U.S. Patent No. 5,563,039 describes a protein homologous to TRADD (Tumor Necrosis Factor Receptor-1 Associated Death Domain containing protein), and modifications of the active domain of TRADD that retain the functional characteristics of the protein, as well as apoptosis assays for testing the function of such death domain containing  
30 proteins. U.S. Patent No. 5,658,883 discloses biologically active TGF-B1 peptides. U.S. Patent No. 5,674,734 discloses protein RIP which contains a C-terminal death domain and an N-terminal kinase domain.

### Leukemia Inhibitory Factor (LIF)

An LIF profile is constructed from sequences of leukemia inhibitor factor, CT-1 (cardiotrophin-1), CNTF (ciliary neurotrophic factor), OSM (oncostatin M), and IL-6 (interleukin-6). This profile encompasses a family of secreted cytokines that have pleiotropic effects on many cell types including hepatocytes, osteoclasts, neuronal cells and cardiac myocytes, and can be used to detect additional genes encoding such proteins. These molecules are all structurally related and share a common co-receptor gp130 which mediates intracellular signal transduction by cytoplasmic tyrosine kinases such as src.

Novel proteins related to this family are also likely to be secreted, to activate gp130 and to function in the development of a variety of cell types. Thus new members of this family would be candidates to be developed as growth or survival factors for the cell types that they stimulate. For more details on this family of cytokines, see Pennica *et al*, *Cytokine and Growth Factor Reviews* (1996) 7:81-91. U.S. Patent No. 5,420,247 discloses LIF receptor and fusion proteins. U.S. Patent No. 5,443,825 discloses human LIF.

### Angiopoietin

Angiopoietin-1 is a secreted ligand of the TIE-2 tyrosine kinase; it functions as an angiogenic factor critical for normal vascular development. Angiopoietin-2 is a natural antagonist of angiopoietin-1 and thus functions as an anti-angiogenic factor. These two proteins are structurally similar and activate the same receptor. (Folkman and D'Amore, *Cell* (1996) 87:1153-1155, and Davis *et al.*, *Cell* (1996) 87:1161-1169.)

The angiopoietin molecules are composed of two domains, a coiled-coil region and a region related to fibrinogen. The fibrinogen domain is found in many molecules including ficolin and tesascin, and is well defined structurally with many members.

### Receptor Protein-Tyrosine Kinases

Receptor Protein-Tyrosine Kinases or RPTKs are described in Lindberg, *Annu. Rev. Cell Biol.* (1994) 10:251-337.

Growth Factors: Epidermal Growth Factor (EGF) and Fibroblast Growth Factor (FGF)

For a discussion of growth factor superfamilies, see Growth Factors: A Practical Approach, Appendix A1 (Ed. McKay and Leigh, Oxford University Press, NY, 1993) pp. 237-243.

The alignments (pretty box) for EGF and FGF are shown in Figures 1 and 2, respectively. U.S. Patent No. 4,444,760 discloses acidic brain fibroblast growth factor, which is active in the promotion of cell division and wound healing. U.S. Patent No. 5,439,818 discloses DNA encoding human recombinant basic fibroblast growth factor, which is active in wound healing. U.S. Patent No. 5,604,293 discloses recombinant human basic fibroblast growth factor, which is useful for wound healing. U.S. Patent No. 5,410,832 discloses brain-derived and recombinant acidic fibroblast growth factor, which act as mitogens for mesoderm and neuroectoderm-derived cells in culture, and promote wound healing in soft tissue, cartilaginous tissue and musculo-skeletal tissue. U.S. Patent No. 5,387,673 discloses biologically active fragments of FGF that retain activity.

Proteins of the TNF Family

A profile derived from the TNF family is created by aligning sequences of the following TNF family members: nerve growth factor (NGF), lymphotoxin, Fas ligand, tumor necrosis factor (TNF), CD40 ligand, TRAIL, ox40 ligand, 4-1BB ligand, CD27 ligand, and CD30 ligand. The profile is designed to identify sequences of proteins that constitute new members or homologues of this family of proteins.

U.S. Patent No. 5,606,023 discloses mutant TNF proteins; U.S. Patent No. 5,597,899 and U.S. Patent No. 5,486,463 disclose TNF muteins; and U.S. Patent No. 5,652,353 discloses DNA encoding TNF $\alpha$  muteins.

Members of the TNF family of proteins have been shown in vitro to multimerize, as described in Burrows *et al.*, *Biochem.* (1994) 33:12741 and Zhang *et al.*, *Mol. Cell. Biol.* (1995) 15:4851 and bind receptors as described in Browning *et al.*, *J. Immunol.* (1994) 147:1230, Androlewicz *et al.*, *J. Biol. Chem.* (1992) 267:2542, and Crowe *et al.*, *Science* (1994) 264:707.

In vivo, TNFs proteolytically cleave a target protein as described in Kriegel *et al.*, *Cell* (1988) 53:45 and Mohler *et al.*, *Nature* (1994) 370:218 and demonstrate cell proliferation and differentiation activity. T-cell or thymocyte proliferation is assayed as described in Armitage *et al.*, *Eur. J. Immunol.* (1992) 22:447; Current Protocols in Immunology, ed. J.E. Coligan *et al.*, 3.1-3.19; Takai *et al.*, *J. Immunol.* (1986) 137:3494-3500, Bertagnoli *et al.*, *J. Immunol.* (1990) 145:1706-1712, Bertagnoli *et al.*, *J. Immunol.* (1991) 133:327-340, Bertagnoli *et al.*, *J. Immunol.* (1992) 149:3778-3783, and Bowman *et al.*, *J. Immunol.* (1994) 152:1756-1761. B cell proliferation and Ig secretion are assayed as described in Maliszewski, *J. Immunol.* (1990) 144:3028-3033, and Assays for B Cell Function: In vitro antibody production, Mond and Brunswick, Current Protocols in Immunol., Coligan Ed vol 1 pp 3.8.1-3.8.16, John Wiley and Sons, Toronto 1994, Kehrl *et al.*, *Science* (1987) 238:1144 and Boussiotis *et al.*, *PNAS USA* (1994) 91:7007.

Other in vivo activities include upregulation of cell surface antigens, upregulation of costimulatory molecules, and cellular aggregation/adhesion as described in Barrett *et al.*, *J. Immunol.* (1991) 146:1722; Bjorck *et al.*, *Eur. J. Immunol.* (1993) 23:1771; Clark *et al.*, *Annu Rev. Immunol.* (1991) 9:97; Ranheim *et al.*, *J. Exp. Med.* (1994) 177:925; Yellin, *J. Immunol.* (1994) 153:666; and Gruss *et al.*, *Blood* (1994) 84:2305.

Proliferation and differentiation of hematopoietic and lymphopoietic cells has also been shown in vivo for TNFs, using assays for embryonic differentiation and hematopoiesis as described in Johansson *et al.*, *Cellular Biology* (1995) 15:141-151, Keller *et al.*, *Mol. Cell. Biol.* (1993) 13:473-486, McClanahan *et al.*, *Blood* (1993) 81:2903-2915 and using assays to detect stem cell survival and differentiation as described in Culture of Hematopoietic Cells, Freshney *et al.* eds, pp 1-21, 23-29, 139-162, 163-179, and 265-268, Wiley-Liss, Inc., New York, NY, 1994, and Hirajama *et al.*, *PNAS USA* (1992) 89:5907-5911.

In vivo activities of TNFs also include lymphocyte survival and apoptosis, assayed as described in Darzynkewicz *et al.*, *Cytometry* (1992) 13:795-808; Gorczyca *et al.*, *Leukemia* (1993) 7:659-670; Itoh *et al.*, *Cell* (1991) 66:233-243; Zacharduk, *J. Immunol.* (1990) 145:4037-4045; Zamai *et al.*, *Cytometry* (1993) 14:891-897; and Gorczyca *et al.*, *Int'l J. Oncol.* (1992) 1:639-648.

Some members of the TNF family are cleaved from the cell surface; others remain membrane bound. The three-dimensional structure of TNF is discussed in Sprang and Eck, Tumor Necrosis Factors; *supra*.

5 TNF proteins include a transmembrane domain. The protein is cleaved into a shorter soluble version, as described in Kriegler *et al.*, *Cell* (1988) 53:45-53, Perez *et al.*, *Cell* (1990) 63:251-258, and Shaw *et al.*, *Cell* (1986) 46:659-667. The transmembrane domain is between amino acid 46 and 77 and the cytoplasmic domain is between position 1 and 45 on the human form of TNF $\alpha$ . The 3-dimensional motifs of TNF include a sandwich of two pleated  $\beta$  sheets. Each sheet is composed of anti-  
10 parallel  $\alpha$  strands.  $\alpha$  Strands facing each other on opposite sites of the sandwich are connected by short polypeptide loops, as described in Van Ostade *et al.*, *Protein Engineering* (1994) 7(1):5-22, and Sprang *et al.*, Tumor Necrosis Factors; *supra*.

Residues of the TNF family proteins that are involved in the  $\beta$  sheet secondary structure have been identified as described in Van Ostade *et al.*, *Protein Engineering*  
15 (1994) 7(1):5-22, and Sprang *et al.*, Tumor Necrosis Factors; *supra*.

TNF receptors are disclosed in U.S. Patent No. 5,395,760. A profile derived from the TNF receptor family is created by aligning sequences of the TNF receptor family, including Apo1/Fas, TNFR I and II, death receptor3 (DR3), CD40, ox40, CD27, and CD30. Thus, the profile is designed to identify, from the nucleic acids of  
20 the invention, sequences of proteins that constitute new members or homologs of this family of proteins.

Tumor necrosis factor receptors exist in two forms in humans: p55 TNFR and p75 TNFR, both of which provide intracellular signals upon binding with a ligand. The extracellular domains of these receptor proteins are cysteine rich. The receptors  
25 can remain membrane bound, although some forms of the receptors are cleaved forming soluble receptors. The regulation, diagnostic, prognostic, and therapeutic value of soluble TNF receptors is discussed in Aderka, *Cytokine and Growth Factor Reviews*, (1996) 7(3):231-240.

### 30 PDGF Family

U.S. Patent No. 5,326,695 discloses platelet derived growth factor agonists; bioactive portions of PDGF-B are used as agonists. U.S. Patent No. 4,845,075

discloses biologically active B-chain homodimers, and also includes variants and derivatives of the PDGF-B chain. U.S. Patent No. 5,128,321 discloses PDGF analogs and methods of use. Proteins having the same bioactivity as PDGF are disclosed, including A and B chain proteins.

5

#### Kinase (Including MKK) Family

U.S. Patent No. 5,650,501 discloses serine/threonine kinase, associated with mitotic and meiotic cell division; the protein has a kinase domain in its N-terminal and 3 PEST regions in the C-terminus. U.S. Patent No. 5,605,825 discloses human

10 PAK65, a serine protein kinase.

The foregoing discussion provides a few examples of the protein profiles that can be compared with the nucleic acids of the invention. One skilled in the art can use these and other protein profiles to identify the genes that correlate with the nucleic acids.

15

#### IX. Determining the Function of the Encoded Expression Products

Ribozymes, antisense constructs, dominant negative mutants, and triplex formation can be used to determine function of the expression product of an nucleic acid-related gene.

20

##### A. Ribozymes

Trans-cleaving catalytic RNAs (ribozymes) are RNA molecules possessing endoribonuclease activity. Ribozymes are specifically designed for a particular target, and the target message must contain a specific nucleotide sequence. They are engineered to cleave any RNA species site-specifically in the background of cellular RNA. The cleavage event renders the mRNA unstable and prevents protein expression. Importantly, ribozymes can be used to inhibit expression of a gene of unknown function for the purpose of determining its function in an in vitro or in vivo context, by detecting the phenotypic effect.

25

One commonly used ribozyme motif is the hammerhead, for which the substrate sequence requirements are minimal. Design of the hammerhead ribozyme is disclosed in Usman *et al.*, *Current Opin. Struct. Biol.* (1996) 6:527-533. Usman

- also discusses the therapeutic uses of ribozymes. Ribozymes can also be prepared and used as described in Long *et al.*, *FASEB J.* (1993) 7:25; Symons, *Ann. Rev. Biochem.* (1992) 61:641; Perrotta *et al.*, *Biochem.* (1992) 31:16-17; Ojwang *et al.*, *Proc. Natl. Acad. Sci. (USA)* (1992) 89:10802-10806; and U.S. Patent No. 5,254,678.
- 5 Ribozyme cleavage of HIV-I RNA is described in U.S. Patent No. 5,144,019; methods of cleaving RNA using ribozymes is described in U.S. Patent No. 5,116,742; and methods for increasing the specificity of ribozymes are described in U.S. Patent No. 5,225,337 and Koizumi *et al.*, *Nucleic Acid Res.* (1989) 17:7059-7071. Preparation and use of ribozyme fragments in a hammerhead structure are also
- 10 described by Koizumi *et al.*, *Nucleic Acids Res.* (1989) 17:7059-7071. Preparation and use of ribozyme fragments in a hairpin structure are described by Chowrira and Burke, *Nucleic Acids Res.* (1992) 20:2835. Ribozymes can also be made by rolling transcription as described in Daubendiek and Kool, *Nat. Biotechnol.* (1997) 15(3):273-277.
- 15 The hybridizing region of the ribozyme may be modified or may be prepared as a branched structure as described in Horn and Urdea, *Nucleic Acids Res.* (1989) 17:6959-67. The basic structure of the ribozymes may also be chemically altered in ways familiar to those skilled in the art, and chemically synthesized ribozymes can be administered as synthetic oligonucleotide derivatives modified by monomeric units.
- 20 In a therapeutic context, liposome mediated delivery of ribozymes improves cellular uptake, as described in Birikh *et al.*, *Eur. J. Biochem.* (1997) 245:1-16.
- Using the nucleic acid sequences of the invention and methods known in the art, ribozymes are designed to specifically bind and cut the corresponding mRNA species. Ribozymes thus provide a means to inhibit the expression of any of the
- 25 proteins encoded by the disclosed nucleic acids or their full-length genes. The full-length gene need not be known in order to design and use specific inhibitory ribozymes. In the case of an nucleic acid or cDNA of unknown function, ribozymes corresponding to that nucleotide sequence can be tested in vitro for efficacy in cleaving the target transcript. Those ribozymes that effect cleavage in vitro are further
- 30 tested in vivo. The ribozyme can also be used to generate an animal model for a disease, as described in Birikh *et al.*, *Eur. J. Biochem.* (1997) 245:1-16. An effective ribozyme is used to determine the function of the gene of interest by blocking its

transcription and detecting a change in the cell. Where the gene is found to be a mediator in a disease, an effective ribozyme is designed and delivered in a gene therapy for blocking transcription and expression of the gene.

- Therapeutic and functional genomic applications of ribozymes proceed
- 5 beginning with knowledge of a portion of the coding sequence of the gene to be inhibited. Thus, for many genes, a partial nucleic acid sequence provides adequate sequence for constructing an effective ribozyme. A target cleavage site is selected in the target sequence, and a ribozyme is constructed based on the 5' and 3' nucleotide sequences that flank the cleavage site. Retroviral vectors are engineered to express
- 10 monomeric and multimeric hammerhead ribozymes targeting the mRNA of the target coding sequence. These monomeric and multimeric ribozymes are tested in vitro for an ability to cleave the target mRNA. A cell line is stably transduced with the retroviral vectors expressing the ribozymes, and the transduction is confirmed by Northern blot analysis and reverse-transcription polymerase chain reaction (RT-PCR).
- 15 The cells are screened for inactivation of the target mRNA by such indicators as reduction of expression of disease markers or reduction of the gene product of the target mRNA.

#### B. Antisense

- 20 Antisense nucleic acids are designed to specifically bind to RNA, resulting in the formation of RNA-DNA or RNA-RNA hybrids, with an arrest of DNA replication, reverse transcription or messenger RNA translation. Antisense polynucleotides based on a selected nucleic acid sequence can interfere with expression of the corresponding gene. Antisense polynucleotides are typically
- 25 generated within the cell by expression from antisense constructs that contain the antisense nucleic acid strand as the transcribed strand. Antisense nucleic acids will bind and/or interfere with the translation of nucleic acid-related mRNA. The expression products of control cells and cells treated with the antisense construct are compared to detect the protein product of the gene corresponding to the nucleic acid.
- 30 The protein is isolated and identified using routine biochemical methods.

One rationale for using antisense methods to determine the function of the gene corresponding to an nucleic acid is the biological activity of antisense



therapeutics. Antisense therapy for a variety of cancers is in clinical phase and has been discussed extensively in the literature. Reed reviewed antisense therapy directed at the Bcl-2 gene in tumors; gene transfer-mediated overexpression of Bcl-2 in tumor cell lines conferred resistance to many types of cancer drugs. (Reed, J.C., *N.C.I.* 5 (1997) 89:988-990). The potential for clinical development of antisense inhibitors of *ras* is discussed by Cowser, L.M., *Anti-Cancer Drug Design* (1997) 12:359-371. Additional important antisense targets include leukemia (Geurtz, A.M., *Anti-Cancer Drug Design* (1997) 12:341-358); human C-ref kinase (Monia, B.P., *Anti-Cancer Drug Design* (1997) 12:327-339); and protein kinase C (McGraw *et al.*, *Anti-Cancer* 10 *Drug Design* (1997) 12:315-326).

Given the extensive background literature and clinical experience in antisense therapy, one skilled in the art can use selected nucleic acids of the invention as additional potential therapeutics. The choice of nucleic acid can be narrowed by first testing them for binding to "hot spot" regions of the genome of cancerous cells. If an 15 nucleic acid is identified as binding to a "hot spot", testing the nucleic acid as an antisense compound in the corresponding cancer cells clearly is warranted.

Ogunbiyi *et al.*, *Gastroenterology* (1997) 113(3):761-766 describe prognostic use of allelic loss in colon cancer; Barks *et al.*, *Genes, Chromosomes, and Cancer* (1997) 19(4):278-285 describe increased chromosome copy number detected by FISH 20 in malignant melanoma; Nishizake *et al.*, *Genes, Chromosomes, and Cancer* (1997) 19(4):267-272 describe genetic alterations in primary breast cancer and their metastases and direct comparison using modified comparative genome hybridization; and Elo *et al.*, *Cancer Research* (1997) 57(16):3356-3359 disclose that loss of heterozygosity at 16z24.1-q24.2 is significantly associated with metastatic and 25 aggressive behavior of prostate cancer.

### C. Dominant Negative Mutations

As an alternative method for identifying function of the nucleic acid-related gene, dominant negative mutations are readily generated for corresponding proteins 30 that are active as homomultimers. A mutant polypeptide will interact with wild-type polypeptides (made from the other allele) and form a non-functional multimer. Thus, a mutation is in a substrate-binding domain, a catalytic domain, or a cellular

localization domain. Preferably, the mutant polypeptide will be overproduced. Point mutations are made that have such an effect. In addition, fusion of different polypeptides of various lengths to the terminus of a protein can yield dominant negative mutants. General strategies are available for making dominant negative mutants. See Herskowitz, *Nature* (1987) 329:219-222. Such a technique can be used for creating a loss-of-function mutation, which is useful for determining the function of a protein.

#### D. Triplex Formation

Endogenous gene expression can also be reduced by inactivating or "knocking out" the gene or its promoter using targeted homologous recombination. (E.g., see Smithies *et al.*, 1985, *Nature* 317:230-234; Thomas & Capecchi, 1987, *Cell* 51:503-512; Thompson *et al.*, 1989 *Cell* 5:313-321; each of which is incorporated by reference herein in its entirety). For example, a mutant, non-functional gene (or a completely unrelated DNA sequence) flanked by DNA homologous to the endogenous gene (either the coding regions or regulatory regions of the gene) can be used, with or without a selectable marker and/or a negative selectable marker, to transfect cells that express that gene *in vivo*. Insertion of the DNA construct, via targeted homologous recombination, results in inactivation of the gene.

Alternatively, endogenous gene expression can be reduced by targeting deoxyribonucleotide sequences complementary to the regulatory region of the target gene (i.e., the gene promoter and/or enhancers) to form triple helical structures that prevent transcription of the gene in target cells in the body. (See generally, Helene, C. 1991, *Anticancer Drug Des.*, 6(6):569-84; Helene, C., *et al.*, 1992, *Ann. N.Y. Acad. Sci.*, 660:27-36; and Maher, L.J., 1992, *Bioassays* 14(12):807-15).

Nucleic acid molecules to be used in triple helix formation for the inhibition of transcription are preferably single stranded and composed of deoxyribonucleotides. The base composition of these oligonucleotides should promote triple helix formation via Hoogsteen base-pairing rules, which generally require sizable stretches of either purines or pyrimidines to be present on one strand of a duplex. Nucleotide sequences may be pyrimidine-based, which will result in TAT and CGC triplets across the three associated strands of the resulting triple helix. The pyrimidine-rich molecules provide

base complementarity to a purine-rich region of a single strand of the duplex in a parallel orientation to that strand. In addition, nucleic acid molecules may be chosen that are purine-rich, for example, containing a stretch of G residues. These molecules will form a triple helix with a DNA duplex that is rich in GC pairs, in which the majority of the purine residues are located on a single strand of the targeted duplex, resulting in CGC triplets across the three strands in the triplex.

Alternatively, the potential sequences that can be targeted for triple helix formation may be increased by creating a so called "switchback" nucleic acid molecule. Switchback molecules are synthesized in an alternating 5'-3', 3'-5' manner, such that they base pair with first one strand of a duplex and then the other, eliminating the necessity for a sizable stretch of either purines or pyrimidines to be present on one strand of a duplex.

Antisense RNA and DNA, ribozyme, and triple helix molecules of the invention may be prepared by any method known in the art for the synthesis of DNA and RNA molecules. These include techniques for chemically synthesizing oligodeoxyribonucleotides and oligoribonucleotides well known in the art such as for example solid phase phosphoramidite chemical synthesis. Alternatively, RNA molecules may be generated by *in vitro* and *in vivo* transcription of DNA sequences encoding the antisense RNA molecule. Such DNA sequences may be incorporated into a wide variety of vectors which incorporate suitable RNA polymerase promoters such as the T7 or SP6 polymerase promoters. Alternatively, antisense cDNA constructs that synthesize antisense RNA constitutively or inducibly, depending on the promoter used, can be introduced stably into cell lines.

Moreover, various well known modifications to nucleic acid molecules may be introduced as a means of increasing intracellular stability and half-life. Possible modifications include but are not limited to the addition of flanking sequences of ribonucleotides or deoxyribonucleotides to the 5' and/or 3' ends of the molecule or the use of phosphorothioate or 2' O-methyl rather than phosphodiesterase linkages within the oligodeoxyribonucleotide backbone.

30

X. Diagnostic & Prognostic Assays and Drug Screening Methods

The present invention provides method for determining whether a subject is at risk for developing a disease or condition characterized by unwanted cell proliferation by detecting the disclosed biomarkers, i.e., the disclosed nucleic acid markers (SEQ ID Nos: 1-850) and/or polypeptide markers for colon cancer encoded thereby.

In clinical applications, human tissue samples can be screened for the presence and/or absence of the biomarkers identified herein. Such samples could consist of needle biopsy cores, surgical resection samples, lymph node tissue, or serum. For example, these methods include obtaining a biopsy, which is optionally fractionated by cryostat sectioning to enrich tumor cells to about 80% of the total cell population. In certain embodiments, nucleic acids extracted from these samples may be amplified using techniques well known in the art. The levels of selected markers detected would be compared with statistically valid groups of metastatic, non-metastatic malignant, benign, or normal colon tissue samples.

In one embodiment, the diagnostic method comprises determining whether a subject has an abnormal mRNA and/or protein level of the disclosed markers, such as by Northern blot analysis, reverse transcription-polymerase chain reaction (RT-PCR), *in situ* hybridization, immunoprecipitation, Western blot hybridization, or immunohistochemistry. According to the method, cells are obtained from a subject and the levels of the disclosed biomarkers, protein or mRNA level, is determined and compared to the level of these markers in a healthy subject. An abnormal level of the biomarker polypeptide or mRNA levels is likely to be indicative of cancer such as colon cancer.

Accordingly, in one aspect, the invention provides probes and primers that are specific to the unique nucleic acid markers disclosed herein. Accordingly, the nucleic acid probes comprise a nucleotide sequence at least 12 nucleotides in length, preferably at least 15 nucleotides, more preferably, 25 nucleotides, and most preferably at least 40 nucleotides, and up to all or nearly all of the coding sequence which is complementary to a portion of the coding sequence of a marker nucleic acid sequence, which nucleic acid sequence is represented by SEQ ID Nos: 1-850 or a sequence complementary thereto.

In one embodiment, the method comprises using a nucleic acid probe to determine the presence of cancerous cells in a tissue from a patient. Specifically, the method comprises:

1. providing a nucleic acid probe comprising a nucleotide  
5 sequence at least 12 nucleotides in length, preferably at least 15 nucleotides, more preferably, 25 nucleotides, and most preferably at least 40 nucleotides, and up to all or nearly all of the coding sequence which is complementary to a portion of the coding sequence of a nucleic acid sequence represented by SEQ  
10 ID Nos: 1-850 or a sequence complementary thereto and is differentially expressed in tumors cells, such as colon cancer cells;
2. obtaining a tissue sample from a patient potentially comprising cancerous cells;
- 15 3. providing a second tissue sample containing cells substantially all of which are non-cancerous;
4. contacting the nucleic acid probe under stringent conditions  
with RNA of each of said first and second tissue samples  
20 (e.g., in a Northern blot or in situ hybridization assay); and
5. comparing (a) the amount of hybridization of the probe with RNA of the first tissue sample, with (b) the amount of hybridization of the probe with RNA of the second tissue sample;
- 25 wherein a statistically significant difference in the amount of hybridization with the RNA of the first tissue sample as compared to the amount of hybridization with the RNA of the second tissue sample is indicative of the presence of cancerous cells in the first tissue sample.

In one aspect, the method comprises in situ hybridization with a probe derived  
30 from a given marker nucleic acid sequence, which nucleic acid sequence is represented by SEQ ID Nos: 1-850 or a sequence complementary thereto. The method comprises contacting the labeled hybridization probe with a sample of a given

type of tissue potentially containing cancerous or precancerous cells as well as normal cells, and determining whether the probe labels some cells of the given tissue type to a degree significantly different (e.g., by at least a factor of two, or at least a factor of five, or at least a factor of twenty, or at least a factor of fifty) than the degree to which  
5 it labels other cells of the same tissue type.

Also within the invention is a method of determining the phenotype of a test cell from a given human tissue, e.g., whether the cell is (a) normal, or (b) cancerous or precancerous, by contacting the mRNA of a test cell with a nucleic acid probe at least 12 nucleotides in length, preferably at least 15 nucleotides, more preferably at least 25  
10 nucleotides, and most preferably at least 40 nucleotides, and up to all or nearly all of a sequence which is complementary to a portion of the coding sequence of a nucleic acid sequence represented by SEQ ID Nos: 1-850 or a sequence complementary thereto, and which is differentially expressed in tumor cells as compared to normal cells of the given tissue type; and determining the approximate amount of  
15 hybridization of the probe to the mRNA, an amount of hybridization either more or less than that seen with the mRNA of a normal cell of that tissue type being indicative that the test cell is cancerous or precancerous.

Alternatively, the above diagnostic assays may be carried out using antibodies to detect the protein product encoded by the marker nucleic acid sequence, which  
20 nucleic acid sequence is represented by SEQ ID Nos: 1-850 or a sequence complementary thereto. Accordingly, in one embodiment, the assay would include contacting the proteins of the test cell with an antibody specific for the gene product of a nucleic acid represented by SEQ ID Nos: 1-850 or a sequence complementary thereto, the marker nucleic acid being one which is expressed at a given control level  
25 in normal cells of the same tissue type as the test cell, and determining the approximate amount of immunocomplex formation by the antibody and the proteins of the test cell, wherein a statistically significant difference in the amount of the immunocomplex formed with the proteins of a test cell as compared to a normal cell of the same tissue type is an indication that the test cell is cancerous or precancerous.

30 Another such method includes the steps of: providing an antibody specific for the gene product of a marker nucleic acid sequence represented by SEQ ID Nos 1-850, the gene product being present in cancerous tissue of a given tissue type (e.g.,

colon tissue) at a level more or less than the level of the gene product in noncancerous tissue of the same tissue type; obtaining from a patient a first sample of tissue of the given tissue type, which sample potentially includes cancerous cells; providing a second sample of tissue of the same tissue type (which may be from the same patient or from a normal control, e.g. another individual or cultured cells), this second sample containing normal cells and essentially no cancerous cells; contacting the antibody with protein (which may be partially purified, in lysed but unfractionated cells, or in situ) of the first and second samples under conditions permitting immunocomplex formation between the antibody and the marker nucleic acid sequence product present in the samples; and comparing (a) the amount of immunocomplex formation in the first sample, with (b) the amount of immunocomplex formation in the second sample, wherein a statistically significant difference in the amount of immunocomplex formation in the first sample less as compared to the amount of immunocomplex formation in the second sample is indicative of the presence of cancerous cells in the first sample of tissue.

The subject invention further provides a method of determining whether a cell sample obtained from a subject possesses an abnormal amount of marker polypeptide which comprises (a) obtaining a cell sample from the subject, (b) quantitatively determining the amount of the marker polypeptide in the sample so obtained, and (c) comparing the amount of the marker polypeptide so determined with a known standard, so as to thereby determine whether the cell sample obtained from the subject possesses an abnormal amount of the marker polypeptide. Such marker polypeptides may be detected by immunohistochemical assays, dot-blot assays, ELISA and the like.

Immunoassays are commonly used to quantitate the levels of proteins in cell samples, and many other immunoassay techniques are known in the art. The invention is not limited to a particular assay procedure, and therefore is intended to include both homogeneous and heterogeneous procedures. Exemplary immunoassays which can be conducted according to the invention include fluorescence polarization immunoassay (FPIA), fluorescence immunoassay (FIA), enzyme immunoassay (EIA), nephelometric inhibition immunoassay (NIA), enzyme linked immunosorbent assay (ELISA), and radioimmunoassay (RIA). An indicator moiety, or label group, can be

attached to the subject antibodies and is selected so as to meet the needs of various uses of the method which are often dictated by the availability of assay equipment and compatible immunoassay procedures. General techniques to be used in performing the various immunoassays noted above are known to those of ordinary skill in the art.

5 In another embodiment, the level of the encoded product, i.e., the product encoded by SEQ ID Nos 1-850 or a sequence complementary thereto, in a biological fluid (e.g., blood or urine) of a patient may be determined as a way of monitoring the level of expression of the marker nucleic acid sequence in cells of that patient. Such a method would include the steps of obtaining a sample of a biological fluid from the patient, contacting the sample (or proteins from the sample) with an antibody specific for a encoded marker polypeptide, and determining the amount of immune complex formation by the antibody, with the amount of immune complex formation being indicative of the level of the marker encoded product in the sample. This determination is particularly instructive when compared to the amount of immune complex formation by the same antibody in a control sample taken from a normal individual or in one or more samples previously or subsequently obtained from the same person.

15 In another embodiment, the method can be used to determine the amount of marker polypeptide present in a cell, which in turn can be correlated with progression of a hyperproliferative disorder, e.g., colon cancer. The level of the marker polypeptide can be used predictively to evaluate whether a sample of cells contains cells which are, or are predisposed towards becoming, transformed cells. Moreover, the subject method can be used to assess the phenotype of cells which are known to be transformed, the phenotyping results being useful in planning a particular therapeutic regimen. For instance very high levels of the marker polypeptide in sample cells is a powerful diagnostic and prognostic marker for a cancer, such as colon cancer. The observation of marker polypeptide level can be utilized in decisions regarding, e.g., the use of more aggressive therapies.

25 As set out above, one aspect of the present invention relates to diagnostic assays for determining, in the context of cells isolated from a patient, if the level of a marker polypeptide is significantly reduced in the sample cells. The term "significantly reduced " refers to a cell phenotype wherein the cell possesses a



reduced cellular amount of the marker polypeptide relative to a normal cell of similar tissue origin. For example, a cell may have less than about 50%, 25%, 10%, or 5% of the marker polypeptide that a normal control cell. In particular, the assay evaluates the level of marker polypeptide in the test cells, and, preferably, compares the measured level with marker polypeptide detected in at least one control cell, e.g., a normal cell and/or a transformed cell of known phenotype.

Of particular importance to the subject invention is the ability to quantitate the level of marker polypeptide as determined by the number of cells associated with a normal or abnormal marker polypeptide level. The number of cells with a particular marker polypeptide phenotype may then be correlated with patient prognosis. In one embodiment of the invention, the marker polypeptide phenotype of the lesion is determined as a percentage of cells in a biopsy which are found to have abnormally high/low levels of the marker polypeptide. Such expression may be detected by immunohistochemical assays, dot-blot assays, ELISA and the like.

Where tissue samples are employed, immunohistochemical staining may be used to determine the number of cells having the marker polypeptide phenotype. For such staining, a multiblock of tissue is taken from the biopsy or other tissue sample and subjected to proteolytic hydrolysis, employing such agents as protease K or pepsin. In certain embodiments, it may be desirable to isolate a nuclear fraction from the sample cells and detect the level of the marker polypeptide in the nuclear fraction.

The tissue samples are fixed by treatment with a reagent such as formalin, glutaraldehyde, methanol, or the like. The samples are then incubated with an antibody, preferably a monoclonal antibody, with binding specificity for the marker polypeptides. This antibody may be conjugated to a label for subsequent detection of binding. Samples are incubated for a time sufficient for formation of the immunocomplexes. Binding of the antibody is then detected by virtue of a label conjugated to this antibody. Where the antibody is unlabeled, a second labeled antibody may be employed, e.g., which is specific for the isotype of the anti-marker polypeptide antibody. Examples of labels which may be employed include radionuclides, fluorescers, chemilumescers, enzymes and the like.

Where enzymes are employed, the substrate for the enzyme may be added to the samples to provide a colored or fluorescent product. Examples of suitable

enzymes for use in conjugates include horseradish peroxidase, alkaline phosphatase, malate dehydrogenase and the like. Where not commercially available, such antibody-enzyme conjugates are readily produced by techniques known to those skilled in the art.

5           In one embodiment, the assay is performed as a dot blot assay. The dot blot assay finds particular application where tissue samples are employed as it allows determination of the average amount of the marker polypeptide associated with a single cell by correlating the amount of marker polypeptide in a cell-free extract produced from a predetermined number of cells.

10           It is well established in the cancer literature that tumor cells of the same type (e.g., breast and/or colon tumor cells) may not show uniformly increased expression of individual oncogenes or uniformly decreased expression of individual tumor suppressor genes. There may also be varying levels of expression of a given marker gene even between cells of a given type of cancer, further emphasizing the need for  
15           reliance on a battery of tests rather than a single test. Accordingly, in one aspect, the invention provides for a battery of tests utilizing a number of probes of the invention, in order to improve the reliability and/or accuracy of the diagnostic test.

          In one embodiment, the present invention also provides a method wherein nucleic acid probes are immobilized on a DNA chip in an organized array.

20           Oligonucleotides can be bound to a solid support by a variety of processes, including lithography. For example a chip can hold up to 250,000 oligonucleotides (GeneChip, Affymetrix). These nucleic acid probes comprise a nucleotide sequence at least about 12 nucleotides in length, preferably at least about 15 nucleotides, more preferably at least about 25 nucleotides, and most preferably at least about 40 nucleotides, and up to  
25           all or nearly all of a sequence which is complementary to a portion of the coding sequence of a marker nucleic acid sequence represented by SEQ ID Nos: 1-850 and is differentially expressed in tumor cells, such as colon cancer cells. The present invention provides significant advantages over the available tests for various cancers, such as colon cancer, because it increases the reliability of the test by providing an  
30           array of nucleic acid markers on a single chip.

          The method includes obtaining a biopsy, which is optionally fractionated by cryostat sectioning to enrich tumor cells to about 80% of the total cell population. The

DNA or RNA is then extracted, amplified, and analyzed with a DNA chip to determine the presence or absence of the marker nucleic acid sequences.

In one embodiment, the nucleic acid probes are spotted onto a substrate in a two-dimensional matrix or array. Samples of nucleic acids can be labeled and then  
5 hybridized to the probes. Double-stranded nucleic acids, comprising the labeled sample nucleic acids bound to probe nucleic acids, can be detected once the unbound portion of the sample is washed away.

The probe nucleic acids can be spotted on substrates including glass, nitrocellulose, etc. The probes can be bound to the substrate by either covalent bonds  
10 or by non-specific interactions, such as hydrophobic interactions. The sample nucleic acids can be labeled using radioactive labels, fluorophores, chromophores, etc.

Techniques for constructing arrays and methods of using these arrays are described in EP No. 0 799 897; PCT No. WO 97/29212; PCT No. WO 97/27317; EP No. 0 785 280; PCT No. WO 97/02357; U.S. Pat. No. 5,593,839; U.S. Pat. No.  
15 5,578,832; EP No. 0 728 520; U.S. Pat. No. 5,599,695; EP No. 0 721 016; U.S. Pat. No. 5,556,752; PCT No. WO 95/22058; and U.S. Pat. No. 5,631,734.

Further, arrays can be used to examine differential expression of genes and can be used to determine gene function. For example, arrays of the instant nucleic acid sequences can be used to determine if any of the nucleic acid sequences are  
20 differentially expressed between normal cells and cancer cells, for example. High expression of a particular message in a cancer cell, which is not observed in a corresponding normal cell, can indicate a cancer specific protein.

In yet another embodiment, the invention contemplates using a panel of antibodies which are generated against the marker polypeptides of this invention,  
25 which polypeptides are encoded by SEQ ID Nos 1-850. Such a panel of antibodies may be used as a reliable diagnostic probe for colon cancer. The assay of the present invention comprises contacting a biopsy sample containing cells, e.g., colon cells, with a panel of antibodies to one or more of the encoded products to determine the presence or absence of the marker polypeptides.

30 The diagnostic methods of the subject invention may also be employed as follow-up to treatment, e.g., quantitation of the level of marker polypeptides may be

indicative of the effectiveness of current or previously employed cancer therapies as well as the effect of these therapies upon patient prognosis.

Accordingly, the present invention makes available diagnostic assays and reagents for detecting gain and/or loss of marker polypeptides from a cell in order to aid in the diagnosis and phenotyping of proliferative disorders arising from, for example, tumorigenic transformation of cells.

The diagnostic assays described above can be adapted to be used as prognostic assays, as well. Such an application takes advantage of the sensitivity of the assays of the invention to events which take place at characteristic stages in the progression of a tumor. For example, a given marker gene may be up- or downregulated at a very early stage, perhaps before the cell is irreversibly committed to developing into a malignancy, while another marker gene may be characteristically up or down regulated only at a much later stage. Such a method could involve the steps of contacting the mRNA of a test cell with a nucleic acid probe derived from a given marker nucleic acid which is expressed at different characteristic levels in cancerous or precancerous cells at different stages of tumor progression, and determining the approximate amount of hybridization of the probe to the mRNA of the cell, such amount being an indication of the level of expression of the gene in the cell, and thus an indication of the stage of tumor progression of the cell; alternatively, the assay can be carried out with an antibody specific for the gene product of the given marker nucleic acid, contacted with the proteins of the test cell. A battery of such tests will disclose not only the existence and location of a tumor, but also will allow the clinician to select the mode of treatment most appropriate for the tumor, and to predict the likelihood of success of that treatment.

The methods of the invention can also be used to follow the clinical course of a tumor. For example, the assay of the invention can be applied to a tissue sample from a patient; following treatment of the patient for the cancer, another tissue sample is taken and the test repeated. Successful treatment will result in either removal of all cells which demonstrate differential expression characteristic of the cancerous or precancerous cells, or a substantial increase in expression of the gene in those cells, perhaps approaching or even surpassing normal levels.

In yet another embodiment, the invention provides methods for determining whether a subject is at risk for developing a disease, such as a predisposition to develop cancer, for example colon cancer, associated with an aberrant activity of any one of the polypeptides encoded by nucleic acids of SEQ ID Nos: 1-850, wherein the  
5 aberrant activity of the polypeptide is characterized by detecting the presence or absence of a genetic lesion characterized by at least one of (i) an alteration affecting the integrity of a gene encoding a marker polypeptides, or (ii) the mis-expression of the encoding nucleic acid. To illustrate, such genetic lesions can be detected by ascertaining the existence of at least one of (i) a deletion of one or more nucleotides  
10 from the nucleic acid sequence, (ii) an addition of one or more nucleotides to the nucleic acid sequence, (iii) a substitution of one or more nucleotides of the nucleic acid sequence, (iv) a gross chromosomal rearrangement of the nucleic acid sequence, (v) a gross alteration in the level of a messenger RNA transcript of the nucleic acid sequence, (vi) aberrant modification of the nucleic acid sequence, such as of the  
15 methylation pattern of the genomic DNA, (vii) the presence of a non-wild type splicing pattern of a messenger RNA transcript of the gene, (viii) a non-wild type level of the marker polypeptide, (ix) allelic loss of the gene, and/or (x) inappropriate post-translational modification of the marker polypeptide.

The present invention provides assay techniques for detecting lesions in the  
20 encoding nucleic acid sequence. These methods include, but are not limited to, methods involving sequence analysis, Southern blot hybridization, restriction enzyme site mapping, and methods involving detection of absence of nucleotide pairing between the nucleic acid to be analyzed and a probe.

Specific diseases or disorders, e.g., genetic diseases or disorders, are  
25 associated with specific allelic variants of polymorphic regions of certain genes, which do not necessarily encode a mutated protein. Thus, the presence of a specific allelic variant of a polymorphic region of a gene in a subject can render the subject susceptible to developing a specific disease or disorder. Polymorphic regions in genes, can be identified, by determining the nucleotide sequence of genes in  
30 populations of individuals. If a polymorphic region is identified, then the link with a specific disease can be determined by studying specific populations of individuals, e.g, individuals which developed a specific disease, such as colon cancer. A

polymorphic region can be located in any region of a gene, e.g., exons, in coding or non coding regions of exons, introns, and promoter region.

In an exemplary embodiment, there is provided a nucleic acid composition comprising a nucleic acid probe including a region of nucleotide sequence which is capable of hybridizing to a sense or antisense sequence of a gene or naturally occurring mutants thereof, or 5' or 3' flanking sequences or intronic sequences naturally associated with the subject genes or naturally occurring mutants thereof. The nucleic acid of a cell is rendered accessible for hybridization, the probe is contacted with the nucleic acid of the sample, and the hybridization of the probe to the sample nucleic acid is detected. Such techniques can be used to detect lesions or allelic variants at either the genomic or mRNA level, including deletions, substitutions, etc., as well as to determine mRNA transcript levels.

A preferred detection method is allele specific hybridization using probes overlapping the mutation or polymorphic site and having about 5, 10, 20, 25, or 30 nucleotides around the mutation or polymorphic region. In a preferred embodiment of the invention, several probes capable of hybridizing specifically to allelic variants are attached to a solid phase support, e.g., a "chip". Mutation detection analysis using these chips comprising oligonucleotides, also termed "DNA probe arrays" is described e.g., in Cronin et al. (1996) *Human Mutation* 7:244. In one embodiment, a chip comprises all the allelic variants of at least one polymorphic region of a gene. The solid phase support is then contacted with a test nucleic acid and hybridization to the specific probes is detected. Accordingly, the identity of numerous allelic variants of one or more genes can be identified in a simple hybridization experiment.

In certain embodiments, detection of the lesion comprises utilizing the probe/primer in a polymerase chain reaction (PCR) (see, e.g. U.S. Patent Nos. 4,683,195 and 4,683,202), such as anchor PCR or RACE PCR, or, alternatively, in a ligase chain reaction (LCR) (see, e.g., Landegran *et al.* (1988) *Science* 241:1077-1080; and Nakazawa *et al.* (1994) *PNAS* 91:360-364), the latter of which can be particularly useful for detecting point mutations in the gene (see Abravaya et al. (1995) *Nuc Acid Res* 23:675-682). In a merely illustrative embodiment, the method includes the steps of (i) collecting a sample of cells from a patient, (ii) isolating nucleic acid (e.g., genomic, mRNA or both) from the cells of the sample, (iii)

contacting the nucleic acid sample with one or more primers which specifically hybridize to a nucleic acid sequence under conditions such that hybridization and amplification of the nucleic acid (if present) occurs, and (iv) detecting the presence or absence of an amplification product, or detecting the size of the amplification product and comparing the length to a control sample. It is anticipated that PCR and/or LCR may be desirable to use as a preliminary amplification step in conjunction with any of the techniques used for detecting mutations described herein.

Alternative amplification methods include: self sustained sequence replication (Guatelli, J.C. *et al.*, 1990, Proc. Natl. Acad. Sci. USA 87:1874-1878), transcriptional amplification system (Kwoh, D.Y. *et al.*, 1989, Proc. Natl. Acad. Sci. USA 86:1173-1177), Q-Beta Replicase (Lizardi, P.M. *et al.*, 1988, Bio/Technology 6:1197), or any other nucleic acid amplification method, followed by the detection of the amplified molecules using techniques well known to those of skill in the art. These detection schemes are especially useful for the detection of nucleic acid molecules if such molecules are present in very low numbers.

In a preferred embodiment of the subject assay, mutations in, or allelic variants, of a gene from a sample cell are identified by alterations in restriction enzyme cleavage patterns. For example, sample and control DNA is isolated, amplified (optionally), digested with one or more restriction endonucleases, and fragment length sizes are determined by gel electrophoresis. Moreover, the use of sequence specific ribozymes (see, for example, U.S. Patent No. 5,498,531) can be used to score for the presence of specific mutations by development or loss of a ribozyme cleavage site.

Another aspect of the invention is directed to the identification of agents capable of modulating the differentiation and proliferation of cells characterized by aberrant proliferation. In this regard, the invention provides assays for determining compounds that modulate the expression of the marker nucleic acids (SEQ ID Nos: 1-850) and/or alter for example, inhibit the bioactivity of the encoded polypeptide.

Several in vivo methods can be used to identify compounds that modulate expression of the marker nucleic acids (SEQ ID Nos: 1-850) and/or alter for example, inhibit the bioactivity of the encoded polypeptide.

Drug screening is performed by adding a test compound to a sample of cells, and monitoring the effect. A parallel sample which does not receive the test compound is also monitored as a control. The treated and untreated cells are then compared by any suitable phenotypic criteria, including but not limited to microscopic analysis, viability testing, ability to replicate, histological examination, the level of a particular RNA or polypeptide associated with the cells, the level of enzymatic activity expressed by the cells or cell lysates, and the ability of the cells to interact with other cells or compounds. Differences between treated and untreated cells indicates effects attributable to the test compound.

Desirable effects of a test compound include an effect on any phenotype that was conferred by the cancer-associated marker nucleic acid sequence. Examples include a test compound that limits the overabundance of mRNA, limits production of the encoded protein, or limits the functional effect of the protein. The effect of the test compound would be apparent when comparing results between treated and untreated cells.

The invention thus also encompasses methods of screening for agents which inhibit expression of the nucleic acid markers (SEQ ID Nos: 1-850) in vitro, comprising exposing a cell or tissue in which the marker nucleic acid mRNA is detectable in cultured cells to an agent in order to determine whether the agent is capable of inhibiting production of the mRNA; and determining the level of mRNA in the exposed cells or tissue, wherein a decrease in the level of the mRNA after exposure of the cell line to the agent is indicative of inhibition of the marker nucleic acid mRNA production.

Alternatively, the screening method may include in vitro screening of a cell or tissue in which marker protein is detectable in cultured cells to an agent suspected of inhibiting production of the marker protein; and determining the level of the marker protein in the cells or tissue, wherein a decrease in the level of marker protein after exposure of the cells or tissue to the agent is indicative of inhibition of marker protein production.

The invention also encompasses in vivo methods of screening for agents which inhibit expression of the marker nucleic acids, comprising exposing a mammal having tumor cells in which marker mRNA or protein is detectable to an agent



suspected of inhibiting production of marker mRNA or protein; and determining the level of marker mRNA or protein in tumor cells of the exposed mammal. A decrease in the level of marker mRNA or protein after exposure of the mammal to the agent is indicative of inhibition of marker nucleic acid expression.

5           Accordingly, the invention provides a method comprising incubating a cell expressing the marker nucleic acids (SEQ ID Nos: 1-850) with a test compound and measuring the mRNA or protein level. The invention further provides a method for quantitatively determining the level of expression of the marker nucleic acids in a cell population, and a method for determining whether an agent is capable of increasing or  
10       decreasing the level of expression of the marker nucleic acids in a cell population. The method for determining whether an agent is capable of increasing or decreasing the level of expression of the marker nucleic acids in a cell population comprises the steps of (a) preparing cell extracts from control and agent-treated cell populations, (b) isolating the marker polypeptides from the cell extracts, (c) quantifying (e.g., in  
15       parallel) the amount of an immunocomplex formed between the marker polypeptide and an antibody specific to said polypeptide. The marker polypeptides of this invention may also be quantified by assaying for its bioactivity. Agents that induce increased the marker nucleic acid expression may be identified by their ability to increase the amount of immunocomplex formed in the treated cell as compared with  
20       the amount of the immunocomplex formed in the control cell. In a similar manner, agents that decrease expression of the marker nucleic acid may be identified by their ability to decrease the amount of the immunocomplex formed in the treated cell extract as compared to the control cell.

          mRNA levels can be determined by Northern blot hybridization. mRNA levels  
25       can also be determined by methods involving PCR. Other sensitive methods for measuring mRNA, which can be used in high throughput assays, e.g., a method using a DELFIA endpoint detection and quantification method, are described, e.g., in Webb and Hurskainen (1996) *Journal of Biomolecular Screening* 1:119. Marker protein levels can be determined by immunoprecipitations or immunohistochemistry using an  
30       antibody that specifically recognizes the protein product encoded by SEQ ID Nos: 1-850.

Agents that are identified as active in the drug screening assay are candidates to be tested for their capacity to block cell proliferation activity. These agents would be useful for treating a disorder involving aberrant growth of cells, especially colon cells.

5 A variety of assay formats will suffice and, in light of the present disclosure, those not expressly described herein will nevertheless be comprehended by one of ordinary skill in the art. For instance, the assay can be generated in many different formats, and include assays based on cell-free systems, e.g., purified proteins or cell lysates, as well as cell-based assays which utilize intact cells.

10 In many drug screening programs which test libraries of compounds and natural extracts, high throughput assays are desirable in order to maximize the number of compounds surveyed in a given period of time. Assays of the present invention which are performed in cell-free systems, such as may be derived with purified or semi-purified proteins or with lysates, are often preferred as "primary" screens in that  
15 they can be generated to permit rapid development and relatively easy detection of an alteration in a molecular target which is mediated by a test compound. Moreover, the effects of cellular toxicity and/or bioavailability of the test compound can be generally ignored in the *in vitro* system, the assay instead being focused primarily on the effect of the drug on the molecular target as may be manifest in an alteration of binding  
20 affinity with other proteins or changes in enzymatic properties of the molecular target.

A. Use of Nucleic Acids as Probes in Mapping and in Tissue Profiling

Probes

25 Polynucleotide probes as described above, e.g., comprising at least 12 contiguous nucleotides selected from the nucleotide sequence of an nucleic acid as shown in SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, are used for a variety of purposes, including identification of human chromosomes and determining  
30 transcription levels. Additional disclosure about preferred regions of the nucleic acid sequences is found in the accompanying tables.

The nucleotide probes are labeled, for example, with a radioactive, fluorescent, biotinylated, or chemiluminescent label, and detected by well known methods appropriate for the particular label selected. Protocols for hybridizing nucleotide probes to preparations of metaphase chromosomes are also well known in the art. A  
5 nucleotide probe will hybridize specifically to nucleotide sequences in the chromosome preparations which are complementary to the nucleotide sequence of the probe. A probe that hybridizes specifically to an nucleic acid should provide a detection signal at least 5-, 10-, or 20-fold higher than the background hybridization provided with other unrelated sequences.

10 In a non-limiting example, commercial programs are available for identifying regions of chromosomes commonly associated with disease, such as cancer. Nucleic acids of the invention can be used to probe these regions. For example, if, through profile searching, a nucleic acid is identified as corresponding to a gene encoding a kinase, its ability to bind to a cancer-related chromosomal region will suggest its role  
15 as a kinase in one or more stages of tumor cell development/growth. Although some experimentation would be required to elucidate the role, the nucleic acid constitutes a new material for isolating a specific protein that has potential for developing a cancer diagnostic or therapeutic.

Nucleotide probes are used to detect expression of a gene corresponding to the  
20 nucleic acid. For example, in Northern blots, mRNA is separated electrophoretically and contacted with a probe. A probe is detected as hybridizing to an mRNA species of a particular size. The amount of hybridization is quantitated to determine relative amounts of expression, for example under a particular condition. Probes are also used to detect products of amplification by polymerase chain reaction. The products of the  
25 reaction are hybridized to the probe and hybrids are detected. Probes are used for in situ hybridization to cells to detect expression. Probes can also be used in vivo for diagnostic detection of hybridizing sequences. Probes are typically labeled with a radioactive isotope. Other types of detectable labels may be used such as chromophores, fluorophores, and enzymes.

30 Expression of specific mRNA can vary in different cell types and can be tissue specific. This variation of mRNA levels in different cell types can be exploited with nucleic acid probe assays to determine tissue types. For example, PCR, branched

DNA probe assays, or blotting techniques utilizing nucleic acid probes substantially identical or complementary to nucleic acids of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, can determine the presence or absence of target cDNA or mRNA.

Examples of a nucleotide hybridization assay are described in Urdea *et al.*, PCT WO92/02526 and Urdea *et al.*, U.S. Patent No. 5,124,246, both incorporated herein by reference. The references describe an example of a sandwich nucleotide hybridization assay.

Alternatively, the Polymerase Chain Reaction (PCR) is another means for detecting small amounts of target nucleic acids, as described in Mullis *et al.*, *Meth. Enzymol.* (1987) 155:335-350; U.S. Patent No. 4,683,195; and U.S. Patent No. 4,683,202, all incorporated herein by reference. Two primer polynucleotides nucleotides hybridize with the target nucleic acids and are used to prime the reaction. The primers may be composed of sequence within or 3' and 5' to the polynucleotides of the Sequence Listing. Alternatively, if the primers are 3' and 5' to these polynucleotides, they need not hybridize to them or the complements. A thermostable polymerase creates copies of target nucleic acids from the primers using the original target nucleic acids as a template. After a large amount of target nucleic acids is generated by the polymerase, it is detected by methods such as Southern blots. When using the Southern blot method, the labeled probe will hybridize to a polynucleotide of the Sequence Listing or complement.

Furthermore, mRNA or cDNA can be detected by traditional blotting techniques described in Sambrook *et al.*, "Molecular Cloning: A Laboratory Manual" (New York, Cold Spring Harbor Laboratory, 1989). mRNA or cDNA generated from mRNA using a polymerase enzyme can be purified and separated using gel electrophoresis. The nucleic acids on the gel are then blotted onto a solid support, such as nitrocellulose. The solid support is exposed to a labeled probe and then washed to remove any unhybridized probe. Next, the duplexes containing the labeled probe are detected. Typically, the probe is labeled with radioactivity.

### Mapping

Nucleic acids of the present invention are used to identify a chromosome on which the corresponding gene resides. Using fluorescence in situ hybridization (FISH) on normal metaphase spreads, comparative genomic hybridization allows total  
5 genome assessment of changes in relative copy number of DNA sequences. See Schwartz and Samad, *Current Opinions in Biotechnology* (1994) 8:70-74; Kallioniemi *et al.*, *Seminars in Cancer Biology* (1993) 4:41-46; Valdes and Tagle, *Methods in Molecular Biology* (1997) 68:1, Boultonwood, ed., Human Press, Totowa, NJ.

Preparations of human metaphase chromosomes are prepared using standard  
10 cytogenetic techniques from human primary tissues or cell lines. Nucleotide probes comprising at least 12 contiguous nucleotides selected from the nucleotide sequence of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto, are used to identify the  
15 corresponding chromosome. The nucleotide probes are labeled, for example, with a radioactive, fluorescent, biotinylated, or chemiluminescent label, and detected by well known methods appropriate for the particular label selected. Protocols for hybridizing nucleotide probes to preparations of metaphase chromosomes are also well known in the art. A nucleotide probe will hybridize specifically to nucleotide sequences in the chromosome preparations that are complementary to the nucleotide sequence of the  
20 probe. A probe that hybridizes specifically to a target gene provides a detection signal at least 5-, 10-, or 20-fold higher than the background hybridization provided with unrelated coding sequences.

Nucleic acids are mapped to particular chromosomes using, for example, radiation hybrids or chromosome-specific hybrid panels. See Leach *et al.*, *Advances  
25 in Genetics*, (1995) 33:63-99; Walter *et al.*, *Nature Genetics* (1994) 7:22-28; Walter and Goodfellow, *Trends in Genetics* (1992) 9:352. Panels for radiation hybrid mapping are available from Research Genentics, Inc., Huntsville, Alabama, USA. Databases for markers using various panels are available via the world wide web at <http://F/shgc-www.stanford.edu>; and other locations. The statistical program RHMAP  
30 can be used to construct a map based on the data from radiation hybridization with a measure of the relative likelihood of one order versus another. RHMAP is available via the world wide web at <http://www.sph.umich.edu/group/statgen/software>.

Such mapping can be useful in identifying the function of the target gene by its proximity to other genes with known function. Function can also be assigned to the target gene when particular syndromes or diseases map to the same chromosome.

5        Tissue Profiling

The nucleic acids of the present invention can be used to determine the tissue type from which a given sample is derived. For example, a metastatic lesion is identified by its developmental organ or tissue source by identifying the expression of a particular marker of that organ or tissue. If a nucleic acid is expressed only in a  
10 specific tissue type, and a metastatic lesion is found to express that nucleic acid, then the developmental source of the lesion has been identified. Expression of a particular nucleic acid is assayed by detection of either the corresponding mRNA or the protein product. Immunological methods, such as antibody staining, are used to detect a particular protein product. Hybridization methods may be used to detect particular  
15 mRNA species, including but not limited to in situ hybridization and Northern blotting.

Use of Polymorphisms

A nucleic acid will be useful in forensics, genetic analysis, mapping, and  
20 diagnostic applications if the corresponding region of a gene is polymorphic in the human population. A particular polymorphic form of the nucleic acid may be used to either identify a sample as deriving from a suspect or rule out the possibility that the sample derives from the suspect. Any means for detecting a polymorphism in a gene are used, including but not limited to electrophoresis of protein polymorphic variants,  
25 differential sensitivity to restriction enzyme cleavage, and hybridization to an allele-specific probe.

B.     Use of Nucleic Acids and Encoded Polypeptides to Raise Antibodies

Expression products of a nucleic acid, the corresponding mRNA or cDNA, or  
30 the corresponding complete gene are prepared and used for raising antibodies for experimental, diagnostic, and therapeutic purposes. For nucleic acids to which a corresponding gene has not been assigned, this provides an additional method of

identifying the corresponding gene. The nucleic acid or related cDNA is expressed as described above, and antibodies are prepared. These antibodies are specific to an epitope on the encoded polypeptide, and can precipitate or bind to the corresponding native protein in a cell or tissue preparation or in a cell-free extract of an in vitro  
5 expression system.

Immunogens for raising antibodies are prepared by mixing the polypeptides encoded by the nucleic acids of the present invention with adjuvants. Alternatively, polypeptides are made as fusion proteins to larger immunogenic proteins. Polypeptides are also covalently linked to other larger immunogenic proteins, such as  
10 keyhole limpet hemocyanin. Immunogens are typically administered intradermally, subcutaneously, or intramuscularly. Immunogens are administered to experimental animals such as rabbits, sheep, and mice, to generate antibodies. Optionally, the animal spleen cells are isolated and fused with myeloma cells to form hybridomas which secrete monoclonal antibodies. Such methods are well known in the art.  
15 According to another method known in the art, the nucleic acid is administered directly, such as by intramuscular injection, and expressed in vivo. The expressed protein generates a variety of protein-specific immune responses, including production of antibodies, comparable to administration of the protein.

Preparations of polyclonal and monoclonal antibodies specific for nucleic  
20 acid-encoded proteins and polypeptides are made using standard methods known in the art. The antibodies specifically bind to epitopes present in the polypeptides encoded by a nucleic acid of SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a sequence complementary thereto. In another embodiment, the antibodies specifically bind to epitopes present in a  
25 polypeptide encoded by SEQ ID Nos. 1-850. Typically, at least about 6, 8, 10, or 12 contiguous amino acids are required to form an epitope. However, epitopes which involve non-contiguous amino acids may require more, for example, at least about 15, 25, or 50 amino acids. A short sequence of a nucleic acid may then be unsuitable for use as an epitope to raise antibodies for identifying the corresponding novel protein,  
30 because of the potential for cross-reactivity with a known protein. However, the antibodies may be useful for other purposes, particularly if they identify common

structural features of a known protein and a novel polypeptide encoded by a nucleic acid of the invention.

Antibodies that specifically bind to human nucleic acid-encoded polypeptides should provide a detection signal at least about 5-, 10-, or 20-fold higher than a  
5 detection signal provided with other proteins when used in Western blots or other immunochemical assays. Preferably, antibodies that specifically bind nucleic acid T-encoded polypeptides do not detect other proteins in immunochemical assays and can immunoprecipitate nucleic acid-encoded proteins from solution.

To test for the presence of serum antibodies to the nucleic acid-encoded  
10 polypeptide in a human population, human antibodies are purified by methods well known in the art. Preferably, the antibodies are affinity purified by passing antiserum over a column to which an nucleic acid-encoded protein, polypeptide, or fusion protein is bound. The bound antibodies can then be eluted from the column, for example using a buffer with a high salt concentration.

15 In addition to the antibodies discussed above, genetically engineered antibody derivatives are made, such as single chain antibodies.

Antibodies may be made by using standard protocols known in the art (See, for example, *Antibodies: A Laboratory Manual* ed. by Harlow and Lane (Cold Spring Harbor Press: 1988)). A mammal, such as a mouse, hamster, or rabbit can be  
20 immunized with an immunogenic form of the peptide (e.g., a mammalian polypeptide or an antigenic fragment which is capable of eliciting an antibody response, or a fusion protein as described above).

In one aspect, this invention includes monoclonal antibodies that show a subject polypeptide is highly expressed in colorectal tissue or tumor tissue, especially  
25 colon cancer tissue or colon cancer-derived cell lines. Therefore, in one embodiment, this invention provides a diagnostic tool for the analysis of expression of a subject polypeptide in general, and in particular, as a diagnostic for colon cancer.

Techniques for conferring immunogenicity on a protein or peptide include conjugation to carriers or other techniques well known in the art. An immunogenic  
30 portion of a protein can be administered in the presence of adjuvant. The progress of immunization can be monitored by detection of antibody titers in plasma or serum. Standard ELISA or other immunoassays can be used with the immunogen as antigen



to assess the levels of antibodies. In a preferred embodiment, the subject antibodies are immunospecific for antigenic determinants of a protein of a mammal, e.g., antigenic determinants of a protein encoded by one of SEQ ID Nos. 1-850 or closely related homologs (e.g., at least 90% identical, and more preferably at least 95% identical).

Following immunization of an animal with an antigenic preparation of a polypeptide, antisera can be obtained and, if desired, polyclonal antibodies isolated from the serum. To produce monoclonal antibodies, antibody-producing cells (lymphocytes) can be harvested from an immunized animal and fused by standard somatic cell fusion procedures with immortalizing cells such as myeloma cells to yield hybridoma cells. Such techniques are well known in the art, and include, for example, the hybridoma technique (originally developed by Kohler and Milstein, (1975) *Nature*, 256: 495-497), the human B cell hybridoma technique (Kozbar *et al.*, (1983) *Immunology Today*, 4: 72), and the EBV-hybridoma technique to produce human monoclonal antibodies (Cole *et al.*, (1985) *Monoclonal Antibodies and Cancer Therapy*, Alan R. Liss, Inc. pp. 77-96). Hybridoma cells can be screened immunochemically for production of antibodies specifically reactive with a polypeptide of the present invention and monoclonal antibodies isolated from a culture comprising such hybridoma cells.

The term antibody as used herein is intended to include fragments thereof which are also specifically reactive with one of the subject polypeptides. Antibodies can be fragmented using conventional techniques and the fragments screened for utility in the same manner as described above for whole antibodies. For example, F(ab)<sub>2</sub> fragments can be generated by treating antibody with pepsin. The resulting F(ab)<sub>2</sub> fragment can be treated to reduce disulfide bridges to produce Fab fragments. The antibody of the present invention is further intended to include bispecific, single-chain, and chimeric and humanized molecules having affinity for a polypeptide conferred by at least one CDR region of the antibody. In preferred embodiments, the antibodies, the antibody further comprises a label attached thereto and able to be detected, (e.g., the label can be a radioisotope, fluorescent compound, chemiluminescent compound, enzyme, or enzyme co-factor).

Antibodies can be used, e.g., to monitor protein levels in an individual for determining, e.g., whether a subject has a disease or condition, such as colon cancer, associated with an aberrant protein level, or allowing determination of the efficacy of a given treatment regimen for an individual afflicted with such a disorder. The level of polypeptides may be measured from cells in bodily fluid, such as in blood samples.

Another application of antibodies of the present invention is in the immunological screening of cDNA libraries constructed in expression vectors such as gt11, gt18-23, ZAP, and ORF8. Messenger libraries of this type, having coding sequences inserted in the correct reading frame and orientation, can produce fusion proteins. For instance, gt11 will produce fusion proteins whose amino termini consist of  $\beta$ -galactosidase amino acid sequences and whose carboxyl termini consist of a foreign polypeptide. Antigenic epitopes of a protein, e.g., other orthologs of a particular protein or other paralogs from the same species, can then be detected with antibodies, as, for example, reacting nitrocellulose filters lifted from infected plates with antibodies. Positive phage detected by this assay can then be isolated from the infected plate. Thus, the presence of homologs can be detected and cloned from other animals, as can alternate isoforms (including splicing variants) from humans.

In another embodiment, a panel of monoclonal antibodies may be used, wherein each of the epitope's involved functions are represented by a monoclonal antibody. Loss or perturbation of binding of a monoclonal antibody in the panel would be indicative of a mutational alteration of the protein and thus of the corresponding gene.

### C. Differential Expression

The present invention also provides a method to identify abnormal or diseased tissue in a human. For nucleic acids corresponding to profiles of protein families as described above, the choice of tissue may be dictated by the putative biological function. The expression of a gene corresponding to a specific nucleic acid is compared between a first tissue that is suspected of being diseased and a second, normal tissue of the human. The normal tissue is any tissue of the human, especially those that express the target gene including, but not limited to, brain, thymus, testis,

heart, prostate, placenta, spleen, small intestine, skeletal muscle, pancreas, and the mucosal lining of the colon.

The tissue suspected of being abnormal or diseased can be derived from a different tissue type of the human, but preferably it is derived from the same tissue type; for example an intestinal polyp or other abnormal growth should be compared with normal intestinal tissue. A difference between the target gene, mRNA, or protein in the two tissues which are compared, for example in molecular weight, amino acid or nucleotide sequence, or relative abundance, indicates a change in the gene, or a gene which regulates it, in the tissue of the human that was suspected of being diseased.

The target genes in the two tissues are compared by any means known in the art. For example, the two genes are sequenced, and the sequence of the gene in the tissue suspected of being diseased is compared with the gene sequence in the normal tissue. The target genes, or portions thereof, in the two tissues are amplified, for example using nucleotide primers based on the nucleotide sequence shown in the Sequence Listing, using the polymerase chain reaction. The amplified genes or portions of genes are hybridized to nucleotide probes selected from a corresponding nucleotide sequence shown SEQ ID No. 1-850. A difference in the nucleotide sequence of the target gene in the tissue suspected of being diseased compared with the normal nucleotide sequence suggests a role of the nucleic acid-encoded proteins in the disease, and provides a lead for preparing a therapeutic agent. The nucleotide probes are labeled by a variety of methods, such as radiolabeling, biotinylation, or labeling with fluorescent or chemiluminescent tags, and detected by standard methods known in the art.

Alternatively, target mRNA in the two tissues is compared. PolyA<sup>+</sup> RNA is isolated from the two tissues as is known in the art. For example, one of skill in the art can readily determine differences in the size or amount of target mRNA transcripts between the two tissues using Northern blots and nucleotide probes selected from the nucleotide sequence shown in the Sequence Listing. Increased or decreased expression of a target mRNA in a tissue sample suspected of being diseased, compared with the expression of the same target mRNA in a normal tissue, suggests

that the expressed protein has a role in the disease, and also provides a lead for preparing a therapeutic agent.

Any method for analyzing proteins is used to compare two nucleic acid-encoded proteins from matched samples. The sizes of the proteins in the two tissues are compared, for example, using antibodies of the present invention to detect nucleic acid-encoded proteins in Western blots of protein extracts from the two tissues. Other changes, such as expression levels and subcellular localization, can also be detected immunologically, using antibodies to the corresponding protein. A higher or lower level of nucleic acid-encoded protein expression in a tissue suspected of being diseased, compared with the same nucleic acid-encoded protein expression level in a normal tissue, is indicative that the expressed protein has a role in the disease, and provides another lead for preparing a therapeutic agent.

Similarly, comparison of gene sequences or of gene expression products, e.g., mRNA and protein, between a human tissue that is suspected of being diseased and a normal tissue of a human, are used to follow disease progression or remission in the human. Such comparisons of genes, mRNA, or protein are made as described above.

For example, increased or decreased expression of the target gene in the tissue suspected of being neoplastic can indicate the presence of neoplastic cells in the tissue. The degree of increased expression of the target gene in the neoplastic tissue relative to expression of the gene in normal tissue, or differences in the amount of increased expression of the target gene in the neoplastic tissue over time, is used to assess the progression of the neoplasia in that tissue or to monitor the response of the neoplastic tissue to a therapeutic protocol over time.

The expression pattern of any two cell types can be compared, such as low and high metastatic tumor cell lines, or cells from tissue which have and have not been exposed to a therapeutic agent. A genetic predisposition to disease in a human is detected by comparing an target gene, mRNA, or protein in a fetal tissue with a normal target gene, mRNA, or protein. Fetal tissues that are used for this purpose include, but are not limited to, amniotic fluid, chorionic villi, blood, and the blastomere of an in vitro-fertilized embryo. The comparable normal target gene is obtained from any tissue. The mRNA or protein is obtained from a normal tissue of a human in which the target gene is expressed. Differences such as alterations in the

nucleotide sequence or size of the fetal target gene or mRNA, or alterations in the molecular weight, amino acid sequence, or relative abundance of fetal target protein, can indicate a germline mutation in the target gene of the fetus, which indicates a genetic predisposition to disease.

5

D. Use of Nucleic Acids, and Encoded Polypeptides to Screen for Peptide  
Analogues and Antagonists

Polypeptides encoded by the instant nucleic acids, e.g., SEQ ID Nos. 1-850, preferably SEQ ID Nos. 1-383, even more preferably SEQ ID Nos. 1-127, or a  
10 sequence complementary thereto, and corresponding full length genes can be used to screen peptide libraries to identify binding partners, such as receptors, from among the encoded polypeptides.

A library of peptides may be synthesized following the methods disclosed in U.S. Pat. No. 5,010,175, and in PCT WO 91/17823. As described below in brief, one  
15 prepares a mixture of peptides, which is then screened to identify the peptides exhibiting the desired signal transduction and receptor binding activity. In the '175 method, a suitable peptide synthesis support (e.g., a resin) is coupled to a mixture of appropriately protected, activated amino acids. The concentration of each amino acid in the reaction mixture is balanced or adjusted in inverse proportion to its coupling  
20 reaction rate so that the product is an equimolar mixture of amino acids coupled to the starting resin. The bound amino acids are then deprotected, and reacted with another balanced amino acid mixture to form an equimolar mixture of all possible dipeptides. This process is repeated until a mixture of peptides of the desired length (e.g., hexamers) is formed. Note that one need not include all amino acids in each step: one  
25 may include only one or two amino acids in some steps (e.g., where it is known that a particular amino acid is essential in a given position), thus reducing the complexity of the mixture. After the synthesis of the peptide library is completed, the mixture of peptides is screened for binding to the selected polypeptide. The peptides are then tested for their ability to inhibit or enhance activity. Peptides exhibiting the desired  
30 activity are then isolated and sequenced.

The method described in WO 91/17823 is similar. However, instead of reacting the synthesis resin with a mixture of activated amino acids, the resin is

divided into twenty equal portions (or into a number of portions corresponding to the number of different amino acids to be added in that step), and each amino acid is coupled individually to its portion of resin. The resin portions are then combined, mixed, and again divided into a number of equal portions for reaction with the second  
5 amino acid. In this manner, each reaction may be easily driven to completion. Additionally, one may maintain separate "subpools" by treating portions in parallel, rather than combining all resins at each step. This simplifies the process of determining which peptides are responsible for any observed receptor binding or signal transduction activity.

10 In such cases, the subpools containing, *e.g.*, 1-2,000 candidates each are exposed to one or more polypeptides of the invention. Each subpool that produces a positive result is then resynthesized as a group of smaller subpools (sub-subpools) containing, *e.g.*, 20-100 candidates, and reassayed. Positive sub-subpools may be resynthesized as individual compounds, and assayed finally to determine the peptides  
15 that exhibit a high binding constant. These peptides can be tested for their ability to inhibit or enhance the native activity. The methods described in WO 91/7823 and U.S. Patent No. 5,194,392 (herein incorporated by reference) enable the preparation of such pools and subpools by automated techniques in parallel, such that all synthesis and resynthesis may be performed in a matter of days.

20 Peptide agonists or antagonists are screened using any available method, such as signal transduction, antibody binding, receptor binding, mitogenic assays, chemotaxis assays, etc. The methods described herein are presently preferred. The assay conditions ideally should resemble the conditions under which the native activity is exhibited *in vivo*, that is, under physiologic pH, temperature, and ionic  
25 strength. Suitable agonists or antagonists will exhibit strong inhibition or enhancement of the native activity at concentrations that do not cause toxic side effects in the subject. Agonists or antagonists that compete for binding to the native polypeptide may require concentrations equal to or greater than the native concentration, while inhibitors capable of binding irreversibly to the polypeptide may  
30 be added in concentrations on the order of the native concentration.

The end results of such screening and experimentation will be at least one novel polypeptide binding partner, such as a receptor, encoded by a nucleic acid of the

invention, and at least one peptide agonist or antagonist of the novel binding partner. Such agonists and antagonists can be used to modulate, enhance, or inhibit receptor function in cells to which the receptor is native, or in cells that possess the receptor as a result of genetic engineering. Further, if the novel receptor shares biologically  
5 important characteristics with a known receptor, information about agonist/antagonist binding may help in developing improved agonists/antagonists of the known receptor.

E. Pharmaceutical Compositions and Therapeutic Uses

Pharmaceutical compositions can comprise polypeptides, antibodies, or  
10 polynucleotides of the claimed invention. The pharmaceutical compositions will comprise a therapeutically effective amount of either polypeptides, antibodies, or polynucleotides of the claimed invention.

The term "therapeutically effective amount" as used herein refers to an amount of a therapeutic agent to treat, ameliorate, or prevent a desired disease or condition, or  
15 to exhibit a detectable therapeutic or preventative effect. The effect can be detected by, for example, chemical markers or antigen levels. Therapeutic effects also include reduction in physical symptoms, such as decreased body temperature. The precise effective amount for a subject will depend upon the subject's size and health, the nature and extent of the condition, and the therapeutics or combination of therapeutics  
20 selected for administration. Thus, it is not useful to specify an exact effective amount in advance. However, the effective amount for a given situation can be determined by routine experimentation and is within the judgment of the clinician.

For purposes of the present invention, an effective dose will be from about  
0.01 mg/ kg to 50 mg/kg or 0.05 mg/kg to about 10 mg/kg of the DNA constructs in  
25 the individual to which it is administered.

A pharmaceutical composition can also contain a pharmaceutically acceptable carrier. The term "pharmaceutically acceptable carrier" refers to a carrier for administration of a therapeutic agent, such as antibodies or a polypeptide, genes, and other therapeutic agents. The term refers to any pharmaceutical carrier that does not  
30 itself induce the production of antibodies harmful to the individual receiving the composition, and which may be administered without undue toxicity. Suitable carriers may be large, slowly metabolized macromolecules such as proteins,

polysaccharides, polylactic acids, polyglycolic acids, polymeric amino acids, amino acid copolymers, and inactive virus particles. Such carriers are well known to those of ordinary skill in the art.

Pharmaceutically acceptable salts can be used therein, for example, mineral  
5 acid salts such as hydrochlorides, hydrobromides, phosphates, sulfates, and the like; and the salts of organic acids such as acetates, propionates, malonates, benzoates, and the like. A thorough discussion of pharmaceutically acceptable excipients is available in *Remington's Pharmaceutical Sciences* (Mack Pub. Co., N.J. 1991).

Pharmaceutically acceptable carriers in therapeutic compositions may contain  
10 liquids such as water, saline, glycerol and ethanol. Additionally, auxiliary substances, such as wetting or emulsifying agents, pH buffering substances, and the like, may be present in such vehicles. Typically, the therapeutic compositions are prepared as injectables, either as liquid solutions or suspensions; solid forms suitable for solution in, or suspension in, liquid vehicles prior to injection may also be prepared.  
15 Liposomes are included within the definition of a pharmaceutically acceptable carrier.

#### Delivery Methods

Once formulated, the nucleic acid compositions of the invention can be (1) administered directly to the subject; (2) delivered ex vivo, to cells derived from the  
20 subject; or (3) delivered in vitro for expression of recombinant proteins.

Direct delivery of the compositions will generally be accomplished by injection, either subcutaneously, intraperitoneally, intravenously or intramuscularly, or delivered to the interstitial space of a tissue. The compositions can also be administered into a tumor or lesion. Other modes of administration include oral and  
25 pulmonary administration, suppositories, and transdermal applications, needles, and gene guns or hyposprays. Dosage treatment may be a single dose schedule or a multiple dose schedule.

Methods for the ex vivo delivery and reimplantation of transformed cells into a subject are known in the art and described in e.g., International Publication No. WO  
30 93/14778. Examples of cells useful in ex vivo applications include, for example, stem cells, particularly hematopoietic, lymph cells, macrophages, dendritic cells, or tumor cells.



Generally, delivery of nucleic acids for both ex vivo and in vitro applications can be accomplished by, for example, dextran-mediated transfection, calcium phosphate precipitation, polybrene mediated transfection, protoplast fusion, electroporation, encapsulation of the polynucleotide(s) in liposomes, and direct  
5 microinjection of the DNA into nuclei, all well known in the art.

Once a subject gene has been found to correlate with a proliferative disorder, such as neoplasia, dysplasia, and hyperplasia, the disorder may be amenable to treatment by administration of a therapeutic agent based on the nucleic acid or corresponding polypeptide.

10 Preparation of antisense polypeptides is discussed above. Neoplasias that are treated with the antisense composition include, but are not limited to, cervical cancers, melanomas, colorectal adenocarcinomas, Wilms' tumor, retinoblastoma, sarcomas, myosarcomas, lung carcinomas, leukemias, such as chronic myelogenous leukemia, promyelocytic leukemia, monocytic leukemia, and myeloid leukemia, and  
15 lymphomas, such as histiocytic lymphoma. Proliferative disorders that are treated with the therapeutic composition include disorders such as anhydric hereditary ectodermal dysplasia, congenital alveolar dysplasia, epithelial dysplasia of the cervix, fibrous dysplasia of bone, and mammary dysplasia. Hyperplasias, for example, endometrial, adrenal, breast, prostate, or thyroid hyperplasias or  
20 pseudoepitheliomatous hyperplasia of the skin, are treated with antisense therapeutic compositions. Even in disorders in which mutations in the corresponding gene are not implicated, downregulation or inhibition of nucleic acid-related gene expression can have therapeutic application. For example, decreasing nucleic acid-related gene expression can help to suppress tumors in which enhanced expression of the gene is  
25 implicated.

Both the dose of the antisense composition and the means of administration are determined based on the specific qualities of the therapeutic composition, the condition, age, and weight of the patient, the progression of the disease, and other relevant factors. Administration of the therapeutic antisense agents of the invention  
30 includes local or systemic administration, including injection, oral administration, particle gun or catheterized administration, and topical administration. Preferably, the therapeutic antisense composition contains an expression construct comprising a

promoter and a polynucleotide segment of at least about 12, 22, 25, 30, or 35 contiguous nucleotides of the antisense strand of a nucleic acid. Within the expression construct, the polynucleotide segment is located downstream from the promoter, and transcription of the polynucleotide segment initiates at the promoter.

5           Various methods are used to administer the therapeutic composition directly to a specific site in the body. For example, a small metastatic lesion is located and the therapeutic composition injected several times in several different locations within the body of tumor. Alternatively, arteries which serve a tumor are identified, and the therapeutic composition injected into such an artery, in order to deliver the  
10       composition directly into the tumor. A tumor that has a necrotic center is aspirated and the composition injected directly into the now empty center of the tumor. The antisense composition is directly administered to the surface of the tumor, for example, by topical application of the composition. X-ray imaging is used to assist in certain of the above delivery methods.

15           Receptor-mediated targeted delivery of therapeutic compositions containing an antisense polynucleotide, subgenomic polynucleotides, or antibodies to specific tissues is also used. Receptor-mediated DNA delivery techniques are described in, for example, Findeis *et al.*, *Trends in Biotechnol.* (1993) 11:202-205; Chiou *et al.*, (1994) *Gene Therapeutics: Methods And Applications Of Direct Gene Transfer* (J.A. Wolff, ed.); Wu & Wu, *J. Biol. Chem.* (1988) 263:621-24; Wu *et al.*, *J. Biol. Chem.* (1994) 269:542-46; Zenke *et al.*, *Proc. Natl. Acad. Sci. (USA)* (1990) 87:3655-59; Wu *et al.*, *J. Biol. Chem.* (1991) 266:338-42. Preferably, receptor-mediated targeted delivery of therapeutic compositions containing antibodies of the invention is used to deliver the antibodies to specific tissue.

25           Therapeutic compositions containing antisense subgenomic polynucleotides are administered in a range of about 100 ng to about 200 mg of DNA for local administration in a gene therapy protocol. Concentration ranges of about 500 ng to about 50 mg, about 1 mg to about 2 mg, about 5 mg to about 500 mg, and about 20 mg to about 100 mg of DNA can also be used during a gene therapy protocol. Factors  
30       such as method of action and efficacy of transformation and expression are considerations which will affect the dosage required for ultimate efficacy of the antisense subgenomic nucleic acids. Where greater expression is desired over a larger

area of tissue, larger amounts of antisense subgenomic nucleic acids or the same amounts readministered in a successive protocol of administrations, or several administrations to different adjacent or close tissue portions of, for example, a tumor site, may be required to effect a positive therapeutic outcome. In all cases, routine experimentation in clinical trials will determine specific ranges for optimal therapeutic effect. A more complete description of gene therapy vectors, especially retroviral vectors, is contained in U.S. Serial No. 08/869,309, which is expressly incorporated herein, and in section F below.

For genes encoding polypeptides or proteins with anti-inflammatory activity, suitable use, doses, and administration are described in U.S. Patent No. 5,654,173, incorporated herein by reference. Therapeutic agents also include antibodies to proteins and polypeptides encoded by the subject nucleic acids, as described in U.S. Patent No. 5,654,173.

#### 15 F. Gene Therapy

The therapeutic nucleic acids of the present invention may be utilized in gene delivery vehicles. The gene delivery vehicle may be of viral or non-viral origin (see generally, Jolly, *Cancer Gene Therapy* (1994) 1:51-64; Kimura, *Human Gene Therapy* (1994) 5:845-852; Connelly, *Human Gene Therapy* (1995) 1:185-193; and 20 Kaplitt, *Nature Genetics* (1994) 6:148-153). Gene therapy vehicles for delivery of constructs including a coding sequence of a therapeutic of the invention can be administered either locally or systemically. These constructs can utilize viral or non-viral vector approaches. Expression of such coding sequences can be induced using endogenous mammalian or heterologous promoters. Expression of the coding 25 sequence can be either constitutive or regulated.

The present invention can employ recombinant retroviruses which are constructed to carry or express a selected nucleic acid molecule of interest. Retrovirus vectors that can be employed include those described in EP 0 415 731; WO 90/07936; WO 94/03622; WO 93/25698; WO 93/25234; U.S. Patent No. 5, 219,740; WO 30 93/11230; WO 93/10218; Vile and Hart, *Cancer Res.* (1993) 53:3860-3864; Vile and Hart, *Cancer Res.* (1993) 53:962-967; Ram et al., *Cancer Res.* (1993) 53:83-88; Takamiya et al., *J. Neurosci. Res.* (1992) 33:493-503; Baba et al., *J. Neurosurg.*

(1993) 79:729-735; U.S. Patent no. 4,777,127; GB Patent No. 2,200,651; and EP 0 345 242. Preferred recombinant retroviruses include those described in WO 91/02805.

Packaging cell lines suitable for use with the above-described retroviral vector  
5 constructs may be readily prepared (see PCT publications WO 95/30763 and WO 92/05266), and used to create producer cell lines (also termed vector cell lines) for the production of recombinant vector particles. Within particularly preferred embodiments of the invention, packaging cell lines are made from human (such as HT1080 cells) or mink parent cell lines, thereby allowing production of recombinant  
10 retroviruses that can survive inactivation in human serum.

The present invention also employs alphavirus-based vectors that can function as gene delivery vehicles. Such vectors can be constructed from a wide variety of alphaviruses, including, for example, Sindbis virus vectors, Semliki forest virus (ATCC VR-67; ATCC VR-1247), Ross River virus (ATCC VR-373; ATCC VR-  
15 1246) and Venezuelan equine encephalitis virus (ATCC VR-923; ATCC VR-1250; ATCC VR 1249; ATCC VR-532). Representative examples of such vector systems include those described in U.S. Patent Nos. 5,091,309; 5,217,879; and 5,185,440; and PCT Publication Nos. WO 92/10578; WO 94/21792; WO 95/27069; WO 95/27044; and WO 95/07994.

20 Gene delivery vehicles of the present invention can also employ parvovirus such as adeno-associated virus (AAV) vectors. Representative examples include the AAV vectors disclosed by Srivastava in WO 93/09239, Samulski et al., *J. Vir.* (1989) 63:3822-3828; Mendelson et al., *Virol.* (1988) 166:154-165; and Flotte et al., *PNAS* (1993) 90:10613-10617.

25 Representative examples of adenoviral vectors include those described by Berkner, *Biotechniques* (1988) 6:616-627; Rosenfeld et al., *Science* (1991) 252:431-434; WO 93/19191; Kolls et al., *PNAS* (1994) 91:215-219; Kass-Eisler et al., *PNAS* (1993) 90:11498-11502; Guzman et al., *Circulation* (1993) 88:2838-2848; Guzman et al., *Cir. Res.* (1993) 73:1202-1207; Zabner et al., *Cell* (1993) 75:207-216; Li et al.,  
30 *Hum. Gene Ther.* (1993) 4:403-409; Cailaud et al., *Eur. J. Neurosci.* (1993) 5:1287-1291; Vincent et al., *Nat. Genet.* (1993) 5:130-134; Jaffe et al., *Nat. Genet.* (1992) 1:372-378; and Levrero et al., *Gene* (1991) 101:195-202. Exemplary adenoviral gene

therapy vectors employable in this invention also include those described in WO 94/12649, WO 93/03769; WO 93/19191; WO 94/28938; WO 95/11984 and WO 95/00655. Administration of DNA linked to killed adenovirus as described in Curiel, *Hum. Gene Ther.* (1992) 3:147-154 may be employed.

- 5 Other gene delivery vehicles and methods may be employed, including polycationic condensed DNA linked or unlinked to killed adenovirus alone, for example Curiel, *Hum. Gene Ther.* (1992) 3:147-154; ligand linked DNA, for example see Wu, *J. Biol. Chem.* (1989) 264:16985-16987; eukaryotic cell delivery vehicles cells, for example see U.S. Serial No. 08/240,030, filed May 9, 1994, and U.S. Serial  
10 No. 08/404,796; deposition of photopolymerized hydrogel materials; hand-held gene transfer particle gun, as described in U.S. Patent No. 5,149,655; ionizing radiation as described in U.S. Patent No. 5,206,152 and in WO92/11033; nucleic charge neutralization or fusion with cell membranes. Additional approaches are described in Philip, *Mol. Cell Biol.* (1994) 14:2411-2418, and in Woffendin, *Proc. Natl. Acad. Sci.*  
15 (1994) 91:1581-1585.

Naked DNA may also be employed. Exemplary naked DNA introduction methods are described in WO 90/11092 and U.S. Patent No. 5,580,859. Uptake efficiency may be improved using biodegradable latex beads. DNA coated latex beads are efficiently transported into cells after endocytosis initiation by the beads.

- 20 The method may be improved further by treatment of the beads to increase hydrophobicity and thereby facilitate disruption of the endosome and release of the DNA into the cytoplasm. Liposomes that can act as gene delivery vehicles are described in U.S. Patent No. 5,422,120, PCT Nos. WO 95/13796, WO 94/23697, and WO 91/14445, and EP No. 0 524 968.

- 25 Further non-viral delivery suitable for use includes mechanical delivery systems such as the approach described in Woffendin *et al.*, *Proc. Natl. Acad. Sci. USA* (1994) 91(24):11581-11585. Moreover, the coding sequence and the product of expression of such can be delivered through deposition of photopolymerized hydrogel materials. Other conventional methods for gene delivery that can be used for delivery  
30 of the coding sequence include, for example, use of hand-held gene transfer particle gun, as described in U.S. Patent No. 5,149,655; use of ionizing radiation for activating

transferred gene, as described in U.S. Patent No. 5,206,152 and PCT No. WO 92/11033.

#### G. Transgenic Animals

5 One aspect of the present invention relates to transgenic non-human animals having germline and/or somatic cells in which the biological activity of one or more genes are altered by a chromosomally incorporated transgene.

In a preferred embodiment, the transgene encodes a mutant protein, such as dominant negative protein which antagonizes at least a portion of the biological  
10 function of a wild-type protein.

Yet another preferred transgenic animal includes a transgene encoding an antisense transcript which, when transcribed from the transgene, hybridizes with a gene or a mRNA transcript thereof, and inhibits expression of the gene.

In one embodiment, the present invention provides a desired non-human  
15 animal or an animal (including human) cell which contains a predefined, specific and desired alteration rendering the non-human animal or animal cell predisposed to cancer. Specifically, the invention pertains to a genetically altered non-human animal (most preferably, a mouse), or a cell (either non-human animal or human) in culture, that is defective in at least one of two alleles of a tumor-suppressor gene. The  
20 inactivation of at least one of these tumor suppressor alleles results in an animal with a higher susceptibility to tumor induction or other proliferative or differentiative disorders, or disorders marked by aberrant signal transduction, e.g., from a cytokine or growth factor. A genetically altered mouse of this type is able to serve as a useful model for hereditary cancers and as a test animal for carcinogen studies. The  
25 invention additionally pertains to the use of such non-human animals or animal cells, and their progeny in research and medicine.

Furthermore, it is contemplated that cells of the transgenic animals of the present invention can include other transgenes, e.g., which alter the biological activity of a second tumor suppressor gene or an oncogene. For instance, the second  
30 transgene can functionally disrupt the biological activity of a second tumor suppressor gene, such as p53, p73, DCC, p21<sup>cip1</sup>, p27<sup>kip1</sup>, Rb, Mad or E2F. Alternatively, the second transgene can cause overexpression or loss of regulation of an oncogene, such

as ras, myc, a cdc25 phosphatase, Bcl-2, Bcl-6, a transforming growth factor, neu, int-3, polyoma virus middle T antigen, SV40 large T antigen, a papillomaviral E6 protein, a papillomaviral E7 protein, CDK4, or cyclin D1.

A preferred transgenic non-human animal of the present invention has  
5 germline and/or somatic cells in which one or more alleles of a gene are disrupted by a chromosomally incorporated transgene, wherein the transgene includes a marker sequence providing a detectable signal for identifying the presence of the transgene in cells of the transgenic animal, and replaces at least a portion of the gene or is inserted into the gene or disrupts expression of a wild-type protein.

10 Still another aspect of the present invention relates to methods for generating non-human animals and stem cells having a functionally disrupted endogenous gene. In a preferred embodiment, the method comprises the steps of:

- (i) constructing a transgene construct including (a) a recombination region having at least a portion of the gene, which recombination region directs  
15 recombination of the transgene with the gene, and (b) a marker sequence which provides a detectable signal for identifying the presence of the transgene in a cell;
- (ii) transferring the transgene into stem cells of a non-human animal;
- (iii) selecting stem cells having a correctly targeted homologous recombination  
20 between the transgene and the gene;
- (iv) transferring cells identified in step (iii) into a non-human blastocyst and implanting the resulting chimeric blastocyst into a non-human female; and
- (v) collecting offspring harboring an endogenous gene allele having the correctly targeted recombination.

25 Yet another aspect of the invention provides a method for evaluating the carcinogenic potential of an agent by (i) contacting a transgenic animal of the present invention with a test agent, and (ii) comparing the number of transformed cells in a sample from the treated animal with the number of transformed cells in a sample from an untreated transgenic animal or transgenic animal treated with a control agent. The  
30 difference in the number of transformed cells in the treated animal, relative to the number of transformed cells in the absence of treatment with a control agent, indicates the carcinogenic potential of the test compound.

Another aspect of the invention provides a method of evaluating an anti-proliferative activity of a test compound. In preferred embodiments, the method includes contacting a transgenic animal of the present invention, or a sample of cells from such animal, with a test agent, and determining the number of transformed cells in a specimen from the transgenic animal or in the sample of cells. A statistically significant decrease in the number of transformed cells, relative to the number of transformed cells in the absence of the test agent, indicates the test compound is a potential anti-proliferative agent.

The practice of the present invention will employ, unless otherwise indicated, conventional techniques of cell biology, cell culture, molecular biology, transgenic biology, microbiology, recombinant DNA, and immunology, which are within the skill of the art. Such techniques are explained fully in the literature. See, for example, *Molecular Cloning A Laboratory Manual*, 2nd Ed., ed. by Sambrook, Fritsch and Maniatis (Cold Spring Harbor Laboratory Press:1989); *DNA Cloning*, Volumes I and II (D. N. Glover ed., 1985); *Oligonucleotide Synthesis* (M. J. Gait ed., 1984); Mullis *et al.* U.S. Patent No. 4,683,195; *Nucleic Acid Hybridization* (B. D. Hames & S. J. Higgins eds. 1984); *Transcription And Translation* (B. D. Hames & S. J. Higgins eds. 1984); *Culture Of Animal Cells* (R. I. Freshney, Alan R. Liss, Inc., 1987); *Immobilized Cells And Enzymes* (IRL Press, 1986); B. Perbal, *A Practical Guide To Molecular Cloning* (1984); the treatise, *Methods In Enzymology* (Academic Press, Inc., N.Y.); *Gene Transfer Vectors For Mammalian Cells* (J. H. Miller and M. P. Calos eds., 1987, Cold Spring Harbor Laboratory); *Methods In Enzymology*, Vols. 154 and 155 (Wu *et al.* eds.), *Immunochemical Methods In Cell And Molecular Biology* (Mayer and Walker, eds., Academic Press, London, 1987); *Handbook Of Experimental Immunology*, Volumes I-IV (D. M. Weir and C. C. Blackwell, eds., 1986); *Manipulating the Mouse Embryo*, (Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1986).

As mentioned above, the sequences described herein are believed to have particular utility in regards to colon cancer. However, they may also be useful with other types of cancers and other disease states.

The present invention will now be illustrated by reference to the following examples which set forth particularly advantageous embodiments. However, it should



be noted that these embodiments are illustrative and are not to be construed as restricting the invention in any way.

XI. Examples

5 A. Identification of differentially expressed sequences in the SW480 library

Description of the SW480 library

SEQ ID NO 1-850 were derived from the SW480 library. The SW480 library is a normalized, subtracted cDNA library that was generated from the RNA derived  
10 from colon cancer cell line SW480 and normal human colon tissue. Human colorectal adenocarcinoma (cancer) cell line SW480; ATCC #CCL228 (Leibovitz et al., Cancer Research 36:4562-4569, 1976) was used to generate double-stranded cDNA that was subsequently used as the tester sample for the subtraction experiment. Poly A<sup>+</sup> RNA from normal human colon tissue (purchased from OriGene Technologies, Inc.  
15 Rockville, MD) was used was used to generate double-stranded cDNA that was used as the driver sample for the subtraction experiment.

The growth conditions of the driver and tester sources in this library were different as SW480 is a rapidly growing cell line and may have higher cellular metabolism. Therefore  
20 some of the differential expression in this library might be due to non-relevant growth effects of the two sources of tissue.

Construction of the SW480 library

Double-stranded cDNA was generated using the Clontech SMART PCR cDNA  
25 Synthesis Kit (purchased from Clontech Laboratories Inc, Palo Alto, CA) following the manufacturer's instructions. Subtraction hybridization steps were performed in accordance with the manufacturer's instructions for the Clontech PCR-Select kit (purchased from Clontech Laboratories Inc, Palo Alto, CA). The subtracted cDNAs were then directly inserted into a T/A cloning vector (TOPO TA Cloning Kit, Invitrogen Corporation, Carlsbad, CA)  
30 according to manufacturer's instructions, transformed into *E. coli*, and plated onto LB-amp plates, containing X-gal and IPTG. 1248 bacterial colonies were picked, transferred to LB-

amp broth and propagated. Plasmids were isolated using column chromatography (QIAprep 96 Turbo Miniprep Kits, Qiagen Corporation, Valencia, CA) on the QIAGEN Biorobot 9600.

#### Initial validation of differential expression

5

The inserts from subtracted clones were amplified by PCR and 10ul of the PCR reaction product was run on a 2.0% agarose gel for 2 hr at 100 volts. The gel was blotted onto a nylon membrane according to standard methods and hybridized as follows: 50 ng aliquots of the RSA1 cut SW480 and normal colon cDNA libraries were labeled with [ $\alpha$ - $^{32}$ P] dCTP by Prime-It RmT Random Primer labeling kit (Stratagene, La Jolla, CA). Nylon membranes containing the PCR amplified DNA from the SW480 library clones were hybridized to the labeled probes at  $4 \times 10^6$  cpm/ml in Express hybridization buffer (Clontech) at 68°C for approximately 16 hours. The membranes were subjected to stringent washes (0.1 X SSC; 0.1% SDS) done at 68°C and were then exposed to phosphorimager screens. The screens were analyzed using Molecular Dynamics ImageQuant software. Clones that exhibited a stronger hybridization signal with the SW480 probe relative to the normal colon probe were deemed to be differentially expressed.

#### Validation of differential expression in colon cancer

20

To validate that the differentially expressed sequences found in this library were specific to colon cancer, the clones were screened with cDNAs prepared from a colon cancer specific library, Delaware (DE), and a normal tissue specific library Maryland (MD).

The DE library is specific for sequences expressed in colon cancer [proximal and distal Dukes' B, microsatellite instability negative (MSI-)] but not expressed in normal tissues, including colon. This colon cancer tissue specific cDNA library, was made using pooled colon cancer cDNA as tester (tumor tissue cDNA pooled from eight patients with either proximal stage B MSI- or distal stage B MSI- cancers). The driver cDNA consisted a combination of cDNAs made from 50% normal colon tissue and a pool of peripheral blood leukocytes (PBL), and normal liver, spleen, lung, kidney, heart, small intestine, skeletal muscle, and prostate tissue cDNAs as the remaining 50% of the driver.

The MD library is specific for sequences expressed in normal tissue, but not expressed in proximal and distal Dukes' B, MSI- colon cancers. The tester cDNA in this case was made up of 50% normal colon tissue cDNA while the other 50% was made up of PBL, liver, spleen, lung, kidney, heart, small intestine, skeletal muscle, and prostate tissue cDNAs. The driver for this library was generated from pools of proximal stage B, MSI- and distal stage B, MSI- tumor tissue cDNAs obtained from eight cancer patients.

SW 480 clones that hybridized with the DE probe, but hybridized to a lesser degree (or not at all) to the MD probe were determined to be differentially expressed. This confirmation of differential expression is additional evidence that the up regulation of the individual clones is related to colon cancer.

#### Sequencing and analysis of differentially expressed clones

The nucleotide sequence of the inserts from clones shown to be differentially expressed was determined by single-pass sequencing from either the T7 or M13 promoter sites using fluorescently labeled dideoxynucleotides via the Sanger sequencing method. Sequences were analyzed according to methods described in the text (XI., Examples; B. Results of Public Database Search).

Each nucleic acid represents sequence from at least a partial mRNA transcript. The nucleic acids of the invention were assigned a sequence identification number (see attachments). The DNA sequences are provided in the attachments containing the sequences.

Of the 1248 colonies examined, 826 individual clones were found to be differentially expressed using the SW480 and normal colon probes. Of these, 681 were found to be differentially expressed using the DE and MD tissue probes. 145 clones that previously showed differential expression with the SW480 and normal colon probes did not show differential expression with the DE and MD probes. 363 of these clones contained known sequences, 213 contained ESTs, and 105 contained novel sequences. An examination of the known sequences revealed that many of the genes are involved in cellular metabolism.

An example of an experiment to identify differentially expressed clones is shown in the Figure, "Differential Expression Analysis". The inserts from subtracted clones were amplified, electrophoresed, and blotted on to membranes as described above. The gel was hybridized with RSA1 cut DE and MD cDNA probes as  
5 described above.

In the Figure, individual clones are designated by a number at the top of each lane; the blots are aligned so that the same clone is represented in the same vertical lane in both the upper ("Cancer Probe") and lower ("Normal Probe") blot. Lanes  
10 labeled "O" indicate clones that are overexpressed, i.e., show a darker, more prominent band in the upper blot ("Cancer Probe") relative to that observed, in the same lane, in the lower blot ("Normal Probe"). The Lane labeled "U" indicates a clone that is underexpressed, i.e., shows a darker, more prominent band in the lower blot ("Normal Probe") relative to that observed, in the same lane, in the upper blot  
15 ("Cancer Probe"). The lane labeled "M", indicates a clone that is marginally overexpressed in cancer and normal cells.

#### B. Results of Public Database searches

The nucleotide sequence of SEQ ID Nos. 1-850 were aligned with individual  
20 sequences that were publicly available. Genbank and divisions of GenBank, such as dbEST, CGAP, and Unigene were the primary databases used to perform the sequence similarity searches. The patent database, GENESEQ, was also utilized.

A total of 850 sequences were analyzed; most sequences were between 200 and 700 nucleotides in length. The sequences were first masked to identify vector-  
25 derived sequences, which were subsequently removed. The remaining sequence information was used to create the sequences listed in the Sequence Listing (SEQ ID Nos. 1-850). Each of these sequences was used as the query sequence to perform a Blast 2 search against the databases listed above. The Blast 2 search differs from the traditional Blast search in that it allows for the introduction of gaps in order to  
30 produce an optimal alignment of two sequences.

A proprietary algorithm was developed to utilize the output from the Blast 2 searches and categorize the sequences based upon high similarity (e value < 1e-40) or

identity to entries contained in the GenBank and dbEST databases. Three categories were created as follows: 1) matches to known human genes, 2) matches to human EST sequences, and 3) no significant match to either 1 or 2, and therefore a potentially novel human sequence.

5

Those skilled in the art will recognize, or be able to ascertain, using not more than routine experimentation, many equivalents to the specific embodiments of the invention described herein. Such specific embodiments and equivalents are intended  
10 to be encompassed by the following claims.

All patents, published patent applications, and publications cited herein are incorporated by reference as if set forth fully herein.

Table 1

SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes	SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes
1	SW0006	O	O	47	SW0558	O	O
2	SW0019M13	O	O	48	SW0585T7	O	O
3	SW0025T7	O	O	49	SW0602T7	O	O
4	SW0026T7	O	O	50	SW0605T7	O	O
5	SW0044	O	O	51	SW0638M13	O	O
6	SW0071	O	O	52	SW0638T7	O	O
7	SW0081T7	O	O	53	SW0652T7	O	O
8	SW0100	O	O	54	SW0659	O	O
9	SW0116	O	O	55	SW0663T7	M	O
10	SW0124	O	O	56	SW0678T7	O	O
11	SW0142M13	O	O	57	SW0682T7	O	M
12	SW0142T7	O	O	58	SW0684	O	O
13	SW0162T7	M	N	59	SW0693T7	M	O
14	SW0181T7	O	O	60	SW0704M13	O	O
15	SW0184	M	O	61	SW0704T7	O	O
16	SW0208T7	O	O	62	SW0709M13	O	O
17	SW0212M13	O	O	63	SW0709T7	O	O
18	SW0212T7	O	O	64	SW0730T7	O	O
19	SW0249	M	O	65	SW0749T7	O	O
20	SW0277	O	O	66	SW0758T7	M	O
21	SW0292	O	O	67	SW0766	O	O
22	SW0305T7	M	O	68	SW0796M13	M	O
23	SW0306	O	O	69	SW0797T7	O	O
24	SW0328	M	O	70	SW0799T7	O	O
25	SW0337	O	O	71	SW0800T7	M	O
26	SW0345	O	O	72	SW0815T7	M	O
27	SW0348	M	O	73	SW0824M13	N	O
28	SW0353	O	O	74	SW0824T7	N	O
29	SW0389T7	O	O	75	SW0837	O	O
30	SW0392T7	M	O	76	SW0843T7	N	O
31	SW0402T7	O	O	77	SW0852	M	O
32	SW0410T7	M	O	78	SW0906T7	O	O
33	SW0411T7	M	M	79	SW0925	N	O
34	SW0433	O	O	80	SW0926T7	O	O
35	SW0445T7	O	O	81	SW0931T7	M	O
36	SW0450T7	O	M	82	SW0932	M	O
37	SW0464	O	O	83	SW0961T7	O	N
38	SW0466	M	O	84	SW0962	O	O
39	SW0469T7	M	O	85	SW0971	O	O
40	SW0489T7	O	O	86	SW0973T7	M	M
41	SW0498	O	O	87	SW0985	O	O
42	SW0511M13	O	O	88	SW1000M13	O	O
43	SW0511T7	O	O	89	SW1000T7	O	O
44	SW0519T7	O	M	90	SW1015T7	O	O
45	SW0522	O	O	91	SW1032T7	O	O
46	SW0539	O	O	92	SW1051	O	O

SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes	SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes
93	SW1052	O	O	142	SW0082T7	O	O
94	SW1053	O	O	143	SW0091T7	O	O
95	SW1059T7	O	O	144	SW0093T7	O	O
96	SW1067	M	O	145	SW0101M13	O	O
97	SW1068M13	O	O	146	SW0101T7	O	O
98	SW1068T7	O	O	147	SW0102T7	O	O
99	SW1085T7	M	O	148	SW0105T7	O	O
100	SW1086M13	M	O	149	SW0108T7	O	M
101	SW1086T7	M	O	150	SW0111T7	O	O
102	SW1088M13	O	O	151	SW0112T7	O	O
103	SW1088T7	O	O	152	SW0117T7	O	O
104	SW1089M13	O	O	153	SW0119T7	O	O
105	SW1089T7	O	O	154	SW0122T7	M	O
106	SW1093T7	O	O	155	SW0131T7	O	O
107	SW1098	O	O	156	SW0132T7	O	O
108	SW1115	O	O	157	SW0144T7	M	O
109	SW1116M13	O	O	158	SW0146T7	M	O
110	SW1116T7	O	O	159	SW0156T7	O	O
111	SW1122	O	O	160	SW0160T7	O	O
112	SW1138M13	O	O	161	SW0163T7	O	O
113	SW1138T7	O	O	162	SW0166T7	O	O
114	SW1139M13	O	O	163	SW0175T7	M	O
115	SW1139T7	O	O	164	SW0177M13	O	O
116	SW1144M13	O	O	165	SW0182T7	O	O
117	SW1144T7	O	O	166	SW0185T7	O	O
118	SW1145M13	M	O	167	SW0189T7	O	O
119	SW1187T7	O	O	168	SW0191T7	O	O
120	SW1195M13	M	O	169	SW0195T7	O	O
121	SW1195T7	M	O	170	SW0202T7	O	O
122	SW1209T7	M	N	171	SW0203T7	O	O
123	SW1225M13	O	O	172	SW0213T7	O	N
124	SW1225T7	O	O	173	SW0224T7	O	O
125	SW1227M13	M	O	174	SW0229T7	O	O
126	SW1227T7	M	O	175	SW0231M13	O	O
127	SW1242	M	O	176	SW0241T7	O	O
128	SW0004M13	O	O	177	SW0242T7	O	O
129	SW0004T7	O	O	178	SW0246T7	O	O
130	SW0011M13	O	O	179	SW0248T7	O	O
131	SW0011T7	O	O	180	SW0254T7	O	O
132	SW0015T7	O	O	181	SW0260T7	M	M
133	SW0024T7	M	O	182	SW0264T7	O	O
134	SW0026M13	O	O	183	SW0267T7	M	O
135	SW0026T7	O	O	184	SW0269T7	O	O
136	SW0033T7	O	O	185	SW0271T7	O	O
137	SW0038T7	M	O	186	SW0273T7	O	O
138	SW0069T7	O	O	187	SW0280T7	O	O
139	SW0073T7	O	O	188	SW0281T7	O	O
140	SW0076T7	O	O	189	SW0291T7	O	O
141	SW0078T7	O	O	190	SW0294T7	O	O

SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes	SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes
191	SW0295T7	O	O	240	SW0575T7	O	O
192	SW0296T7	O	O	241	SW0577T7	O	O
193	SW0297T7	O	O	242	SW0583T7	O	O
194	SW0301T7	O	O	243	SW0604T7	O	O
195	SW0310T7	O	O	244	SW0605M13	O	O
196	SW0311M13	O	O	245	SW0609T7	M	O
197	SW0325T7	O	O	246	SW0610M13	M	O
198	SW0326T7	O	O	247	SW0610T7	M	O
199	SW0330T7	M	O	248	SW0613T7	O	M
200	SW0334T7	O	N	249	SW0621T7	O	O
201	SW0339T7	O	O	250	SW0633T7	O	O
202	SW0341T7	O	O	251	SW0647T7	O	O
203	SW0358T7	O	O	252	SW0654M13	M	O
204	SW0359T7	M	O	253	SW0658T7	M	O
205	SW0360T7	O	O	254	SW0662T7	O	O
206	SW0361M13	O	O	255	SW0663M13	M	O
207	SW0367T7	O	O	256	SW0668T7	O	O
208	SW0369T7	O	O	257	SW0672T7	O	O
209	SW0394T7	O	O	258	SW0674T7	O	N
210	SW0399T7	O	O	259	SW0676T7	O	M
211	SW0401T7	O	O	260	SW0677T7	O	O
212	SW0403T7	O	O	261	SW0678M13	O	O
213	SW0412T7	M	O	262	SW0681T7	O	M
214	SW0419T7	O	O	263	SW0683T7	O	M
215	SW0429T7	M	M	264	SW0687T7	O	M
216	SW0434T7	O	O	265	SW0688T7	O	O
217	SW0441T7	O	O	266	SW0692T7	O	N
218	SW0446T7	O	O	267	SW0694T7	O	O
219	SW0454T7	O	O	268	SW0697T7	O	O
220	SW0461T7	O	O	269	SW0710T7	O	O
221	SW0468T7	O	O	270	SW0711T7	O	O
222	SW0484T7	O	U	271	SW0713T7	N	M
223	SW0489M13	O	U	272	SW0724T7	M	U
224	SW0496T7	O	U	273	SW0734T7	M	O
225	SW0499T7	O	O	274	SW0736T7	N	M
226	SW0507T7	O	M	275	SW0744T7	O	O
227	SW0514T7	O	M	276	SW0751T7	O	O
228	SW0520T7	O	M	277	SW0753T7	O	O
229	SW0531T7	M	N	278	SW0763T7	O	O
230	SW0537T7	M	N	279	SW0768T7	M	M
231	SW0548T7	O	U	280	SW0770T7	O	M
232	SW0555T7	O	N	281	SW0772T7	O	N
233	SW0557T7	O	N	282	SW0774T7	M	O
234	SW0560T7	O	N	283	SW0778T7	M	M
235	SW0563T7	O	U	284	SW0779T7	M	M
236	SW0570T7	O	O	285	SW0783T7	O	O
237	SW0572T7	O	M	286	SW0784T7	O	M
238	SW0573T7	M	U	287	SW0786T7	N	O
239	SW0574T7	O	O	288	SW0787T7	O	N



SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes	SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes
289	SW0797M13	O	O	338	SW1065T7	O	O
290	SW0803T7	O	O	339	SW1080T7	M	M
291	SW0809T7	O	N	340	SW1085M13	M	O
292	SW0811T7	M	N	341	SW1087T7	O	O
293	SW0815M13	M	O	342	SW1091T7	O	O
294	SW0821T7	O	O	343	SW1093M13	O	O
295	SW0825T7	M	M	344	SW1097T7	O	O
296	SW0826T7	M	M	345	SW1104T7	O	O
297	SW0827M13	O	O	346	SW1105T7	O	O
298	SW0828T7	O	M	347	SW1106T7	O	O
299	SW0836T7	M	O	348	SW1107T7	O	O
300	SW0839T7	O	M	349	SW1108T7	O	O
301	SW0843M13	N	O	350	SW1109T7	O	O
302	SW0846M13	O	M	351	SW1114T7	O	O
303	SW0847T7	O	M	352	SW1123T7	O	O
304	SW0849T7	M	M	353	SW1124T7	O	O
305	SW0850T7	O	O	354	SW1130T7	M	O
306	SW0855T7	O	O	355	SW1131T7	M	O
307	SW0863T7	M	M	356	SW1132T7	M	O
308	SW0866T7	O	O	357	SW1133M13	M	O
309	SW0867T7	N	O	358	SW1134T7	O	O
310	SW0896M13	N	O	359	SW1136T7	O	N
311	SW0912T7	O	O	360	SW1141T7	M	O
312	SW0914T7	O	O	361	SW1146T7	M	O
313	SW0916T7	O	O	362	SW1147T7	O	O
314	SW0918T7	O	O	363	SW1155T7	O	N
315	SW0921T7	N	O	364	SW1156T7	O	N
316	SW0923T7	O	O	365	SW1160T7	O	N
317	SW0926M13	O	O	366	SW1161T7	O	N
318	SW0928T7	N	M	367	SW1169T7	O	N
319	SW0947T7	O	O	368	SW1176T7	O	O
320	SW0949T7	O	O	369	SW1182T7	O	O
321	SW0954T7	M	O	370	SW1193T7	O	O
322	SW0964T7	M	N	371	SW1201T7	O	O
323	SW0969T7	M	N	372	SW1203T7	O	O
324	SW0972T7	M	N	373	SW1212T7	O	M
325	SW0982T7	O	M	374	SW1213M13	O	M
326	SW0994T7	O	N	375	SW1214T7	O	N
327	SW0998T7	O	N	376	SW1218T7	O	N
328	SW1001T7	O	O	377	SW1220T7	O	N
329	SW1002T7	O	N	378	SW1232T7	O	N
330	SW1012T7	O	O	379	SW1236M13	O	N
331	SW1018T7	O	M	380	SW1238T7	O	O
332	SW1045T7	O	M	381	SW1239T7	O	O
333	SW1046T7	M	O	382	SW1245M13	M	N
334	SW1058T7	O	O	383	SW1247T7	O	O
335	SW1059M13	O	O	384	SW0003T7	O	O
336	SW1061T7	O	O	385	SW0009T7	O	O
337	SW1064T7	O	O	386	SW0012T7	O	O

SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes	SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes
387	SW0013T7	O	O	436	SW0158T7	O	O
388	SW0015T7	O	O	437	SW0159T7	O	O
389	SW0016T7	U	N	438	SW0169T7	O	O
390	SW0018T7	O	O	439	SW0170T7	O	O
391	SW0019T7	O	O	440	SW0171T7	O	O
392	SW0023T7	O	O	441	SW0173T7	O	O
393	SW0025T7	O	O	442	SW0178T7	O	O
394	SW0027T7	O	O	443	SW0179T7	O	O
395	SW0029M13	O	O	444	SW0180T7	O	O
396	SW0030T7	O	O	445	SW0183T7	O	N
397	SW0039T7	O	O	446	SW0186T7	M	M
398	SW0043T7	O	O	447	SW0187T7	M	U
399	SW0046T7	O	O	448	SW0188T7	O	O
400	SW0048T7	O	O	449	SW0190T7	O	O
401	SW0050T7	O	O	450	SW0192T7	O	O
402	SW0052T7	O	O	451	SW0196T7	O	O
403	SW0063T7	O	O	452	SW0199T7	O	O
404	SW0064T7	O	O	453	SW0201T7	O	M
405	SW0068T7	O	N	454	SW0204T7	O	M
406	SW0072T7	O	O	455	SW0205T7	O	N
407	SW0074T7	O	N	456	SW0206T7	O	O
408	SW0075T7	O	O	457	SW0207T7	O	M
409	SW0077T7	O	O	458	SW0210T7	O	O
410	SW0080T7	O	O	459	SW0211T7	O	O
411	SW0081T7	O	O	460	SW0214T7	O	O
412	SW0085T7	O	O	461	SW0217T7	O	O
413	SW0088T7	O	O	462	SW0218T7	O	O
414	SW0090T7	O	O	463	SW0220T7	O	O
415	SW0095T7	O	O	464	SW0223T7	O	O
416	SW0103T7	M	O	465	SW0229T7	O	O
417	SW0104T7	M	O	466	SW0237T7	O	O
418	SW0121T7	O	N	467	SW0244T7	O	O
419	SW0123T7	O	O	468	SW0247T7	O	O
420	SW0125T7	O	O	469	SW0250T7	O	O
421	SW0127T7	O	O	470	SW0251T7	O	O
422	SW0128T7	O	O	471	SW0252T7	O	O
423	SW0129T7	O	O	472	SW0253T7	O	O
424	SW0130T7	O	N	473	SW0255T7	O	O
425	SW0133T7	M	M	474	SW0256T7	O	O
426	SW0134T7	O	O	475	SW0257T7	O	O
427	SW0135T7	M	O	476	SW0258T7	O	O
428	SW0140T7	O	O	477	SW0262T7	O	O
429	SW0141T7	M	O	478	SW0275T7	O	O
430	SW0143T7	O	O	479	SW0278T7	M	O
431	SW0145T7	O	O	480	SW0285T7	O	O
432	SW0147T7	O	O	481	SW0289T7	O	M
433	SW0152T7	O	O	482	SW0290T7	O	O
434	SW0155T7	O	N	483	SW0293T7	O	O
435	SW0157T7	O	O	484	SW0300T7	O	O

SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes	SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes
485	SW0302T7	O	O	534	SW0430T7	M	O
486	SW0303T7	O	O	535	SW0435T7	O	O
487	SW0307T7	O	O	536	SW0436T7	O	O
488	SW0308T7	O	O	537	SW0438T7	O	O
489	SW0311T7	O	O	538	SW0439M13	O	O
490	SW0312T7	O	O	539	SW0440T7	O	O
491	SW0313T7	O	O	540	SW0442M13	O	N
492	SW0314T7	O	O	541	SW0443T7	O	O
493	SW0319T7	O	O	542	SW0444T7	O	O
494	SW0322T7	O	N	543	SW0448T7	O	M
495	SW0333T7	O	O	544	SW0452M13	O	O
496	SW0338T7	M	O	545	SW0455T7	O	O
497	SW0340T7	O	O	546	SW0456T7	O	O
498	SW0342T7	O	O	547	SW0457T7	O	O
499	SW0344T7	O	O	548	SW0458T7	O	O
500	SW0346T7	O	O	549	SW0459T7	O	O
501	SW0347T7	O	O	550	SW0460T7	M	M
502	SW0349T7	M	O	551	SW0463T7	O	O
503	SW0350T7	O	O	552	SW0467M13	O	O
504	SW0351T7	O	O	553	SW0469M13	M	O
505	SW0352T7	O	O	554	SW0473M13	O	M
506	SW0354T7	O	O	555	SW0474T7	O	O
507	SW0355T7	O	O	556	SW0476T7	O	O
508	SW0356T7	O	M	557	SW0481T7	O	U
509	SW0357T7	O	O	558	SW0485T7	O	U
510	SW0361T7	O	O	559	SW0486T7	O	U
511	SW0362T7	O	O	560	SW0487T7	O	U
512	SW0365T7	O	O	561	SW0488T7	O	O
513	SW0366T7	O	O	562	SW0490T7	U	U
514	SW0381T7	O	O	563	SW0491T7	O	U
515	SW0391M13	O	O	564	SW0492T7	O	U
516	SW0393T7	O	O	565	SW0494T7	O	U
517	SW0395T7	O	M	566	SW0495T7	O	O
518	SW0396T7	M	O	567	SW0497T7	O	N
519	SW0398T7	O	O	568	SW0500T7	O	U
520	SW0400T7	O	O	569	SW0501T7	N or U	U
521	SW0404T7	O	O	570	SW0502T7	M	N
522	SW0405T7	O	O	571	SW0503T7	O	U
523	SW0406T7	M	O	572	SW0504T7	O	N
524	SW0407T7	O	O	573	SW0505T7	N	N
525	SW0408T7	M	O	574	SW0506T7	O	U
526	SW0413T7	M	O	575	SW0509T7	O	M
527	SW0414T7	O	U	576	SW0512T7	O	U
528	SW0415T7	O	O	577	SW0513T7	O	U
529	SW0417T7	N	O	578	SW0515T7	O	O
530	SW0418T7	O	O	579	SW0516T7	O	M
531	SW0426T7	O	O	580	SW0517T7	O	M
532	SW0427T7	O	O	581	SW0518T7	O	N
533	SW0428T7	M	U	582	SW0525T7	M	N

SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes	SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes
583	SW0529T7	O	N	632	SW0651T7	O	N
584	SW0532T7	O	N	633	SW0653T7	M	O
585	SW0533T7	O	N	634	SW0655T7	O	O
586	SW0534T7	O	M	635	SW0656T7	O	O
587	SW0535T7	O	O	636	SW0664T7	M	O
588	SW0536T7	M	U	637	SW0666T7	O	O
589	SW0538T7	O	N	638	SW0667T7	O	U
590	SW0540T7	O	O	639	SW0671T7	O	O
591	SW0541T7	O	O	640	SW0673T7	O	M
592	SW0542T7	O	O	641	SW0675T7	O	O
593	SW0543T7	O	O	642	SW0686T7	O	O
594	SW0544M13	O	M	643	SW0689T7	O	O
595	SW0545T7	O	O	644	SW0693M13	M	O
596	SW0546T7	O	O	645	SW0695T7	O	M
597	SW0547T7	O	U	646	SW0698T7	M	M
598	SW0550T7	O	M	647	SW0701T7	O	O
599	SW0551T7	O	M	648	SW0708T7	O	M
600	SW0552T7	O	U	649	SW0714T7	O	O
601	SW0554T7	O	U	650	SW0715T7	O	N
602	SW0559T7	O	M	651	SW0716T7	O	M
603	SW0561T7	O	N	652	SW0720T7	O	O
604	SW0562T7	O	U	653	SW0722T7	O	N
605	SW0566T7	O	O	654	SW0723T7	O	O
606	SW0567T7	O	N	655	SW0725T7	O	M
607	SW0568T7	O	N	656	SW0726T7	O	O
608	SW0569T7	O	O	657	SW0727T7	M	U
609	SW0571T7	O	O	658	SW0728T7	O	U
610	SW0578T7	O	N	659	SW0729T7	O	O
611	SW0580T7	O	O	660	SW0730M13	O	M
612	SW0582T7	O	O	661	SW0731T7	O	C
613	SW0584T7	O	O	662	SW0732T7	O	N
614	SW0591T7	N	O	663	SW0733T7	O	O
615	SW0606T7	O	O	664	SW0735T7	O	O
616	SW0607T7	O	O	665	SW0738T7	O	O
617	SW0608T7	O	O	666	SW0740T7	O	N
618	SW0611T7	O	O	667	SW0750T7	O	O
619	SW0612T7	N	O	668	SW0752T7	O	O
620	SW0616T7	O	M	669	SW0755T7	O	O
621	SW0623T7	O	O	670	SW0756T7	O	N
622	SW0629T7	O	O	671	SW0757T7	O	O
623	SW0635T7	O	O	672	SW0761T7	O	N
624	SW0636T7	O	O	673	SW0762T7	O	O
625	SW0637T7	O	M	674	SW0764T7	M	O
626	SW0640T7	N	O	675	SW0765T7	O	O
627	SW0641T7	O	M	676	SW0767T7	M	O
628	SW0642T7	O	O	677	SW0769T7	M	M
629	SW0644T7	O	O	678	SW0771T7	O	M
630	SW0645T7	O	O	679	SW0775T7	M	M
631	SW0646T7	O	O	680	SW0776T7	O	O

SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes	SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes
681	SW0780T7	O	O	730	SW0920T7	O	O
682	SW0782T7	M	M	731	SW0922T7	O	O
683	SW0785T7	O	O	732	SW0929T7	O	O
684	SW0789T7	O	O	733	SW0930T7	O	O
685	SW0790T7	O	N	734	SW0933T7	M	O
686	SW0795T7	O	O	735	SW0936T7	M	O
687	SW0796T7	M	M	736	SW0937T7	O	O
688	SW0798T7	M	M	737	SW0938T7	N	O
689	SW0799M13	O	O	738	SW0940T7	O	O
690	SW0801T7	O	O	739	SW0943T7	O	O
691	SW0802T7	M	M	740	SW0945T7	O	O
692	SW0804T7	O	O	741	SW0946T7	N	O
693	SW0806T7	O	M	742	SW0951T7	O	O
694	SW0807T7	N	N	743	SW0952T7	O	O
695	SW0810T7	M	O	744	SW0953T7	O	O
696	SW0814T7	O	O	745	SW0955T7	N	O
697	SW0816T7	N	N	746	SW0957T7	O	O
698	SW0819T7	O	O	747	SW0967T7	O	M
699	SW0822T7	O	M	748	SW0968T7	O	O
700	SW0827T7	O	O	749	SW0970T7	O	N
701	SW0829T7	O	M	750	SW0974T7	O	O
702	SW0830T7	O	M	751	SW0975T7	O	O
703	SW0831T7	O	O	752	SW0976T7	O	O
704	SW0834T7	O	O	753	SW0977T7	M	N
705	SW0835T7	O	N	754	SW0978T7	O	N
706	SW0838T7	O	U	755	SW0983T7	O	M
707	SW0840T7	O	O	756	SW0988T7	O	N
708	SW0842T7	O	O	757	SW0989T7	M	O
709	SW0845T7	O	O	758	SW0990T7	M	N
710	SW0846T7	O	M	759	SW0991T7	O	N
711	SW0848T7	O	M	760	SW0992T7	O	O
712	SW0851T7	M	M	761	SW0997T7	M	N
713	SW0853T7	O	O	762	SW1004T7	O	O
714	SW0854T7	N	O	763	SW1007T7	M	N
715	SW0857T7	O	O	764	SW1008T7	O	U
716	SW0858T7	M	N	765	SW1024T7	O	M
717	SW0859T7	M	M	766	SW1027T7	O	O
718	SW0860T7	O	M	767	SW1028T7	O	C
719	SW0862T7	M	M	768	SW1029T7	O	M
720	SW0865T7	N	O	769	SW1030T7	M	O
721	SW0868T7	O	O	770	SW1032M13	O	O
722	SW0891T7	O	O	771	SW1036T7	O	N
723	SW0897T7	O	O	772	SW1037T7	O	N
724	SW0898T7	O	O	773	SW1039T7	O	N
725	SW0901T7	O	O	774	SW1047T7	M	N
726	SW0904T7	O	O	775	SW1048T7	O	O
727	SW0905T7	N	O	776	SW1050T7	O	O
728	SW0917T7	O	O	777	SW1055T7	O	O
729	SW0919T7	O	O	778	SW1062T7	O	O

SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes	SEQ ID NO	clone name	Cell line probe	Cancer Tissue Probes
779	SW1063T7	O	O	828	SW1192T7	O	N
780	SW1066T7	O	O	829	SW1196T7	M	N
781	SW1069T7	O	O	830	SW1199T7	M	O
782	SW1070T7	M	O	831	SW1200T7	O	M
783	SW1074T7	O	O	832	SW1202T7	O	N
784	SW1075T7	O	O	833	SW1204T7	O	N
785	SW1076T7	O	O	834	SW1205T7	O	N
786	SW1077T7	O	O	835	SW1207T7	O	N
787	SW1078T7	O	O	836	SW1210T7	M	N
788	SW1081T7	O	O	837	SW1213T7	O	M
789	SW1082T7	O	O	838	SW1221T7	O	N
790	SW1094T7	O	O	839	SW1223T7	O	O
791	SW1095T7	O	N	840	SW1224T7	O	N
792	SW1096T7	O	O	841	SW1228T7	O	O
793	SW1099T7	O	O	842	SW1230T7	O	N
794	SW1101T7	O	O	843	SW1231T7	O	O
795	SW1103T7	O	O	844	SW1234T7	O	O
796	SW1111T7	O	O	845	SW1235T7	O	N
797	SW1112T7	O	O	846	SW1237T7	O	N
798	SW1113T7	O	O	847	SW1240T7	O	O
799	SW1117T7	O	O	848	SW1241T7	O	O
800	SW1118T7	O	O	849	SW1243T7	O	O
801	SW1119T7	O	O	850	SW1246T7	O	N
802	SW1121T7	O	N				
803	SW1125T7	O	O				
804	SW1128T7	M	N				
805	SW1129T7	O	O				
806	SW1140T7	M	N				
807	SW1143T7	O	O				
808	SW1145T7	M	O				
809	SW1149T7	M	O				
810	SW1153T7	O	N				
811	SW1157T7	O	O				
812	SW1158T7	O	N				
813	SW1164T7	O	M				
814	SW1165T7	O	N				
815	SW1166T7	O	O				
816	SW1167T7	O	N				
817	SW1170T7	M	N				
818	SW1171T7	O	N				
819	SW1172T7	O	N				
820	SW1173T7	O	N				
821	SW1175T7	O	N				
822	SW1178T7	O	O				
823	SW1179T7	O	O				
824	SW1180T7	M	N				
825	SW1183T7	O	M				
826	SW1187M13	O	N				
827	SW1189T7	O	N				

## Table 2

SEQ ID NO	Clone name	"Novel" Region 1		"Novel" Region 2		GenBank Identifier for top 5 matching EST sequences	
		Start / Stop	Start / Stop	Start / Stop	Start / Stop	Start / Stop	Start / Stop
128	SW0004M13	742-865				g1947473	g1969195
129	SW0004T7	752-910				g1947473	g1969195
130	SW0011M13	1-218		553-932		g2241970	g2140706
131	SW0011T7	1-264		599-890		g2241970	g2140706
132	SW0015T7	483-606				g675241	g900355
133	SW0024T7	1-148		268-606		g4033911	g1960000
134	SW0026M13	400-598				g767139	g880785
135	SW0026T7	1-199		285-336		g767139	g880785
136	SW0033T7	427-610				g2873486	g1960450
137	SW0038T7	321-645				g4222862	g2583432
138	SW0069T7	366-612				g770924	g1308307
139	SW0073T7	521-592				g1152099	g2191626
140	SW0076T7	456-618				g2567157	g2236340
142	SW0082T7	511-601				g1718668	g1274002
146	SW0101T7	420-624				g1376510	g708780
147	SW0102T7	512-599				g4223023	g3430515
148	SW0105T7	1-219		570-609		g2835475	g1482129
149	SW0108T7	220-296		552-589		g2154028	g1303058
150	SW0111T7	1-68				g1308307	g4332333
153	SW0119T7	510-596				g4265953	g2836717
154	SW0122T7	1-51				g1760809	g3804685
158	SW0146T7	1-76		333-617		g2009649	g985491
159	SW0156T7	1-71		782-1002		g2902747	g3887935
162	SW0166T7	1-48		444-638		g2264624	g3755582
163	SW0175T7	1-303		829-1002		g724430	g2154572
166	SW0185T7	113-208				g1647210	g1647264
168	SW0191T7	383-683				g829950	g771211
172	SW0213T7	443-617				g3886373	g955334
174	SW0229T7	293-987				g2033455	
						g1947473	g2216795
						g1947473	g2216795
						g2241970	g1720731
						g2241970	g1720731
						g675241	g706376
						g4033911	g2180239
						g767139	g2558187
						g767139	g2558187
						g2873486	g2268964
						g4222862	g2768420
						g770924	g1844710
						g1152099	g2025963
						g2567157	g3754642
						g1718668	g3214360
						g1376510	g901666
						g4223023	g4125195
						g2835475	g1817372
						g2154028	g1792312
						g1308307	g2882934
						g4265953	g3228921
						g1760809	g661521
						g2009649	g956142
						g2902747	g4884438
						g2264624	g4440147
						g724430	g1891049
						g1647210	g1958041
						g829950	g3886862
						g3886373	g766442
						g2033455	g1940943
						g1947473	g2216795
						g1947473	g2216795
						g2241970	g1720731
						g2241970	g1720731
						g675241	g1774265
						g4033911	g2180239
						g767139	g2558187
						g767139	g2558187
						g2873486	g2268964
						g4222862	g2768420
						g770924	g1844710
						g1152099	g2025963
						g2567157	g3754642
						g1718668	g3214360
						g1376510	g901666
						g4223023	g4125195
						g2835475	g1817372
						g2154028	g1792312
						g1308307	g2882934
						g4265953	g3228921
						g1760809	g661521
						g2009649	g956142
						g2902747	g4884438
						g2264624	g4440147
						g724430	g1891049
						g1647210	g1958041
						g829950	g3886862
						g3886373	g766442
						g2033455	g1940943
						g1947473	g2216795
						g1947473	g2216795
						g2241970	g1720731
						g2241970	g1720731
						g675241	g1774265
						g4033911	g2180239
						g767139	g2558187
						g767139	g2558187
						g2873486	g2268964
						g4222862	g2768420
						g770924	g1844710
						g1152099	g2025963
						g2567157	g3754642
						g1718668	g3214360
						g1376510	g901666
						g4223023	g4125195
						g2835475	g1817372
						g2154028	g1792312
						g1308307	g2882934
						g4265953	g3228921
						g1760809	g661521
						g2009649	g956142
						g2902747	g4884438
						g2264624	g4440147
						g724430	g1891049
						g1647210	g1958041
						g829950	g3886862
						g3886373	g766442
						g2033455	g1940943
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252	SW0654M13	398-461				g1894108 g838679 g788785 g815632	g1639675
253	SW0658T7	133-433				g2878157 g3091572 g3923528 g3917060	g4687687
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255	SW0663M13	315-605				g2786351 g645679 g961061 g1178347	g1880239
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274	SW0736T7	499-674				g4735776	g2458732	
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277	SW0753T7	457-734				g1281367	g2013326	g1254955
279	SW0768T7	1-457				g816092	g2028907	
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285	SW0783T7	433-692				g2884478	g2882317	g4307250
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We claim:

1. An isolated nucleic acid comprising a nucleotide sequence which hybridizes under stringent conditions to a sequence of SEQ ID Nos. 1-127 or a sequence complementary thereto.
- 5 2. An isolated nucleic acid comprising a nucleotide sequence at least 80% identical to a sequence corresponding to at least about 15 consecutive nucleotides of one of SEQ ID Nos. 1-127 or a sequence complementary thereto.
- 10 3. An isolated nucleic acid comprising a nucleotide sequence of SEQ ID Nos. 1-127 or a sequence complementary thereto.
- 15 4. A nucleic acid according to claim 1, further comprising a transcriptional regulatory sequence operably linked to said nucleotide sequence so as to render said nucleotide sequence suitable for use as an expression vector.
- 20 5. An expression vector, capable of replicating in at least one of a prokaryotic cell and eukaryotic cell, comprising the nucleic acid of claim 4.
- 25 6. A host cell transfected with the expression vector of claim 5.
7. A transgenic animal having a transgene of the nucleic acid of claim 1 incorporated in cells thereof, which transgene modifies the level of expression of the nucleic acid, the stability of an mRNA transcript of the nucleic acid, or the activity of the encoded product of the nucleic acid.
- 30 8. A substantially pure nucleic acid which hybridizes under stringent conditions to a nucleic acid probe corresponding to at least 12 consecutive nucleotides of one of SEQ ID Nos. 1-127 or a sequence complementary thereto.

9. A polypeptide including an amino acid sequence encoded by a nucleic acid of claim 1 or a fragment comprising at least 25 amino acids thereof.
10. A probe/primer comprising a substantially purified oligonucleotide, said  
5 oligonucleotide containing a region of nucleotide sequence which hybridizes under stringent conditions to at least 12 consecutive nucleotides of sense or antisense sequence selected from SEQ ID Nos. 1-127.
11. An array including at least 10 different probes of claim 10 attached to a solid  
10 support.
12. The probe/primer of claim 10, further comprising a label group attached thereto and able to be detected.
13. The probe/primer of claim 12, wherein said label group being selected from  
15 radioisotopes, fluorescent compounds, enzymes, and enzyme co-factors.
14. An antibody immunoreactive with a polypeptide of claim 9.
15. An antisense oligonucleotide analog which hybridizes under stringent  
20 conditions to at least 12 consecutive nucleotides of one of SEQ ID Nos. 1-850 or a sequence complementary thereto, and which is resistant to cleavage by a nuclease.
16. A test kit for determining the phenotype of transformed cells, comprising the  
25 probe/primer of claim 12, for measuring a level of a nucleic acid which hybridizes under stringent conditions to a nucleic acid of SEQ ID Nos. 1-850 in a sample of cells isolated from a patient.
17. A test kit for determining the phenotype of transformed cells, comprising an  
30 antibody specific for a protein encoded by a nucleic acid which hybridizes under stringent conditions to any one of SEQ Nos. 1-850.

18. A method of determining the phenotype of a cell, comprising detecting the differential expression, relative to a normal cell, of at least one nucleic acid which hybridizes under stringent conditions to one of SEQ ID Nos. 1-850,  
5 wherein the nucleic acid is differentially expressed by at least a factor of two.
19. A method for determining the phenotype of cells in a sample of cells from a patient, comprising:
- i. providing a nucleic acid probe comprising a nucleotide  
10 sequence having at least 12 consecutive nucleotides of any of SEQ ID Nos. 1-850;
  - ii. obtaining a sample of cells from a patient;
  - iii. providing a second sample of cells substantially all of which are non-cancerous;
  - 15 iv. contacting the nucleic acid probe under stringent conditions with mRNA of each of said first and second cell samples; and
  - v. comparing (a) the amount of hybridization of the probe with mRNA of the first cell sample, with (b) the amount of hybridization of the probe with mRNA of the second cell sample, wherein a difference  
20 of at least a factor of two in the amount of hybridization with the mRNA of the first cell sample as compared to the amount of hybridization with the mRNA of the second cell sample is indicative of the phenotype of cells in the first cell sample.
- 25 20. A method of determining the phenotype of a cell, comprising detecting the differential expression, relative to a normal cell, of at least one protein encoded by a nucleic acid which hybridizes under stringent conditions to one of SEQ ID Nos. 1-850, wherein the protein is differentially expressed by at least a factor of two.
- 30 21. The method of claim 20, wherein the level of said protein is detected in an immunoassay.

22. A method for determining the presence or absence of a nucleic acid which hybridizes under stringent conditions to one of SEQ ID Nos. 1-127 in a cell, comprising contacting the cell with a probe of claim 10.
- 5
23. A method for determining the presence or absence of a polypeptide encoded by a nucleic acid which hybridizes under stringent conditions to one of SEQ ID Nos. 1-127 in a cell, comprising contacting the cell with an antibody of claim 14.
- 10
24. A method for detecting a mutation in a test nucleic acid which hybridizes under stringent conditions to a nucleic acid of SEQ ID Nos. 1-383 or a sequence complementary thereto, comprising
- 15
- i. collecting a sample of cells from a patient,
  - ii. isolating nucleic acid from the cells of the sample,
  - iii. contacting the nucleic acid sample with one or more primers which specifically hybridize to a nucleic acid sequence of SEQ ID Nos. 1-383 under conditions such that hybridization and amplification of the nucleic acid occurs, and
- 20
- iv. comparing the presence, absence, or size of an amplification product to the amplification product of a normal cell.
25. A method for identifying an agent which alters the level of expression in a cell of a nucleic acid which hybridizes under stringent conditions to one of SEQ ID
- 25
- Nos. 1-850 or a sequence complementary thereto, comprising
- i. providing a cell;
  - ii. treating the cell with a test agent;
  - iii. determining the level of expression in the cell of a nucleic acid which hybridizes under stringent conditions to one of SEQ ID Nos. 1-
- 30
- 850 or a sequence complementary thereto; and
  - iv. comparing the level of expression of the nucleic acid in the treated cell with the level of expression of the nucleic acid in an



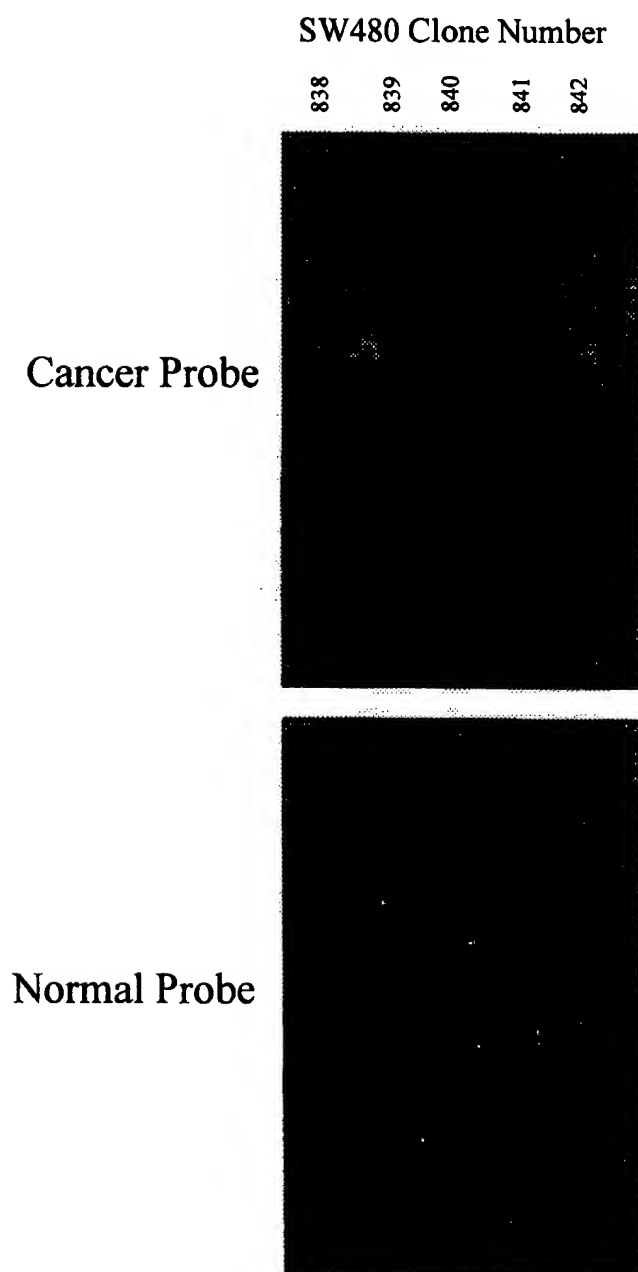
untreated cell, wherein a change in the level of expression of the nucleic acid in the treated cell relative to the level of expression of the nucleic acid in the untreated cell is indicative of an agent which alters the level of expression of the nucleic acid in a cell.

- 5
26. A pharmaceutical composition comprising an agent identified by the method of claim 25.
- 10 27. A pharmaceutical composition comprising a nucleic acid which includes a nucleotide sequence which hybridizes under stringent conditions to one of SEQ ID Nos. 1-850 or a sequence complementary thereto.
- 15 28. A pharmaceutical composition comprising a polypeptide encoded by a nucleic acid which includes a nucleotide sequence that hybridizes under stringent conditions to one of SEQ ID Nos. 1-850 or a sequence complementary thereto.
29. An isolated nucleic acid comprising a portion of a nucleotide sequence of SEQ ID Nos. 128-383 or a sequence complementary thereto.
- 20 30. A gene which hybridizes to one of SEQ ID Nos. 1-383.
31. A method for detecting cancer in which one or more of SEQ ID Nos. 1-850 are used as probes, said method comprising:
- 25     i. collecting a sample of cells from a patient,
- ii. isolating nucleic acid from the cells of the sample,
- iii. contacting the nucleic acid sample with one or more primers which specifically hybridize to a nucleic acid sequence of SEQ ID Nos. 1-850 under conditions such that hybridization and amplification of the nucleic acid occurs, and
- 30     iv. comparing the presence, absence, or size of an amplification product to the amplification product of a normal cell.

32. A method of claim 31 in which said cancer is colon cancer.
33. A method for detecting cancer in a patient sample in which an antibody to a  
5 protein encoded by SEQ ID Nos. 1-850 is used to react with proteins in said  
sample.
34. A method of claim 33 in which said cancer is colon cancer.

10

## Differential Expression Analysis



## SEQUENCE LISTING

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<120> NOVEL HUMAN GENES AND GENE EXPRESSION  
PRODUCTS

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gatgatttgt	cactgtctgc	catcatccct	agatggaaaa	caagctcacc	caaagtctcn	420
cttntgccna	ggngtncctg	atgccaaagt	tcncattttt	gacctggggc	ggaaaaaggc	480
naaagnggat	gagttccgct	ttgnggccac	atgntgtgag	atgaatntga	gcagctgcct	540
ctgaagccct	ggaggctgcc	cgaatttgng	ccaatannta	ccccgaagcg	ctggtacgat	600
tcccaagggg	agcgctttt	acactgngcc	ctganacttc	nnttcagat	cggtcnggcc	660
ttttaacttt	tggtttcccg	tttgtcaaan	gacattgctt	cctttanttt	tncagctggg	720

gngncttgga	aaggattggg	ccctggcttc	tcnaggatgg	ctaaggatga	anngatatca	780
aggngctggca	tgaaanaant	cncgggtccn	nctttnggct	nggttnctt	gggacctggc	840
cgggcccgtc	cgtttcgaaa	gggcnaaatt	ctggcagaat	ttccttgana	cctgggcggg	900
g						901

<210> 3  
 <211> 553  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (553)  
 <223> n = A,T,C or G

<400> 3						
actgctttct	gctgccgctc	aggatagcac	tggctttcac	agggattanc	cttctggtgg	60
tgggcacaac	tgtggtggga	tacttgccaa	atgggaggtt	taaggagttc	atgagtaaac	120
atgttcactt	aatgtgttac	cggatctgcg	tgcgagcgct	gacagccatc	atcacctacc	180
atgacagggg	aaacagacca	agaaatggtg	gcatctgtgt	ggccaatcat	acctcaccga	240
tcgatgngat	catcttggcc	agcgatggct	attatgccat	ggtgggtcaa	gtgcacgggg	300
gactcatggg	tgtgattcac	agagccatgg	tgaaggcctg	cccacacgtc	tggtttgagc	360
gctcggaagt	gaaggatcgc	cacctggtgg	ctaagagact	gactgaacat	gtgcaagatn	420
aaagcaagct	gcctatcctc	atcttcccag	aaggaacctg	catcaataat	acatcgngga	480
tgatgttcaa	aaagggaagn	tttgaaattg	ayccacagt	ttaccctggn	gctatnaagt	540
atgaccctca	att					553

<210> 4  
 <211> 565  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (565)  
 <223> n = A,T,C or G

<400> 4						
actgctttct	gctgccgctc	aggatagcac	tggctttcac	agggattagc	cttctggtgg	60
tgggcacaac	tgtggtggga	tacttgccaa	atgggaggtt	taaggagttc	atgagtaaac	120
atgttcactt	aatgtgttac	cggatctgcg	tgcgagcgct	gacagccatc	atcacctacc	180
atgacagggg	aaacagacca	agaaatggtg	gcatctgtgt	ggccaatcat	acctcaccga	240
tcgatgtgat	catcttggcc	agcgatggct	attatgccat	ggtgggtcaa	gtgcacgggg	300
gactcatggg	tgtgattcag	agagccatgg	tgaaggcctg	cccacacgtc	tggtttgagc	360
gctcggaagt	gaaggatcgc	cacctggtgg	ctaagagact	gactgaacat	gtgcaagata	420
aaagcaagct	gcctatctca	tctttccaga	aggaacctgc	atcataatac	attggtgata	480
tgtcaaaaan	gggaagtttt	gaaatgganc	cccagtttaa	cctgnngntt	tnagtttnac	540
ccttaatttg	gcaagccttt	tggan				565

<210> 5  
 <211> 500  
 <212> DNA  
 <213> Homo sapiens

```

<400> 5
caggtacaca ttcaggggtc actgactctt cagataatgc cctaaacaac tggagtgtgg      60
gcttgtttgc tccaagagca gctgccctgt cagtgggaact ccggcgccact tccactcaat      120
actggactgg gggggatgaa agagggattt ttaaatggca gaaaagtgtt cttctgggct      180
gtctggcccc ggcagggcgg gttgtgactt ggaaaagaag ggaaggttag ggaggccttg      240
aacttaggga cagccagcaa atgatccttg cagcttttgg aacacaaggc agggctaagg      300
ttacctttca gcttccttgc ttaagtagca gtggctaagt gggttaaact ttgctcggcc      360
tgcaggtccc ccctgttggt cagatacttg cattgacatc ctcaagtgtc aatgctcctg      420
gaagagccca ggagagggcg gcactggccc agggattgca ggtcagggaa ctctagcaaa      480
ttcccacacc ctagggtacc                                     500

```

```

<210> 6
<211> 622
<212> DNA
<213> Homo sapiens

```

```

<400> 6
acaaggaaat gtcagtcagg ggtggttgcatt attacatata tgtggttacc gaacttggtt      60
tacattattg attaaattca ttttctcttt ctctttttta gacctttgga tatctcctcc      120
tccttccccct tatctataaaa tatgtaagaa agaaaacatg tttaaaatac aatattttat      180
ttctttttag cacagattag acttaaagaa cagagatgcc ctataatgtg atctttaaga      240
gatattacaa agcttccaat ctcaactgtga ggatcggttaa agtataataa taaaaaaaaa      300
tgtatattat aaaagaatgt aagaatgtgc atattttatt ccttgcatat taatggcata      360
agaaactgtt aacagggact tggggtaagg cttgtgggaa ggaaggtagt tttcactgta      420
ttccttttgt attgttttaa gtttttactt gttttttaag caagcatgta tcactttata      480
tgatatttaa aagttgctct tctcaagaca gaaaatcatt ttgattcatt tctaattcaa      540
ataagcacta attgaggata ttttaatata tcctcacatt gtgaaaggat taaggcacaa      600
tttctagctt caaaactgta cc                                     622

```

```

<210> 7
<211> 621
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(621)
<223> n = A,T,C or G

```

```

<400> 7
ggtacccttg tctttaaaag gattccccct tataaggact cttcaagtaa atccacacat      60
atatagtcaa ctaatttttg acaaagacac caagaatata caatggggaa aggatagtgt      120
cttcaataaa cagtattgga aatactggat atccacatgc aaaagaatga aattggatga      180
aatatggtga aattatttta caccgtaccg gctccccaac gtgcacggca ggagctacgg      240
cccagcgccg ggcgtggccc acgtgcagaa atggagtttc atcatgttgt cctctcgaaac      300
tcttgacctc aagtga*cca cccgncctgc ccttccaaag tgctgagatt acaggaagag      360
tctaacctgc tctgcaagct cttgagtcgc gccaaagatga tattttaaag gtctgtatga      420
agttgaaagc tgcagntgat ggccntttca agatgattca aaccncngat gcnnacttgg      480
atgtaancca ccntaattca agccggtnan nccnccnant taaccnnaag ggccctggatt      540
tgaattcagg cnttggnaaag gttncggggc ccttaaaaana nattgggggtt aacgcaaacc      600
ggcttccntt ccttttcttg n                                     621

```

<210> 8  
 <211> 649  
 <212> DNA  
 <213> Homo sapiens

<400> 8  
 actgatctcc tgttggcctg cttcatttgt cctgcagttg tcaatccaga acaatatgga 60  
 ataatttccg atgctcctat taatgaagta gcacgattta atctgatgca ggtaggccgc 120  
 cttttgcagc agttagcaat gactggctct gaagcggag atccccgaac aaagagcagc 180  
 cttggaaaagt ttgacaaaag ctgtgttgcc gctttccttg atgttgatgat tgggggccgt 240  
 gcagtgaggaga cccctccatt gtcttccgtc aatcttctgg aaggattgag cagaactgtg 300  
 gtttatataa cctacagtca ggcttattac tctgggtgaat tttatgaaag agtgtgatgt 360  
 ctggagatca actgagagaa gatagaatgg ctcttgacaa tttattggca aacctacccc 420  
 cggccaagcc agggaaaagt agcagtttag aaatgactcc ctacaatata cctcagctat 480  
 ctccagcaac cactccagca aataaaaaaga atcgattacc tatagcaact cggagcagaa 540  
 gccgcaccaa tatgctaatt gacctacata tggaccatga aggatcctct caagaaacca 600  
 tccaggaggt gcaaccagaa gaggtgttgg tcatttcctt aggtacctc 649

<210> 9  
 <211> 645  
 <212> DNA  
 <213> Homo sapiens

<400> 9  
 acttagtgca acatattgaa cttaaattcc agttttcctg gaattacttg tgtcttgagc 60  
 taaaggctgt atttgatata acagggaagg aaagaaatta ttttcctat aaaattagtt 120  
 tagtttaaaa acacatataa ttaaacaaaa taaaaatatt attccatctt ttaaagaaca 180  
 tttactaatt cacagatatt acccgaagtt tagaaagtca cctaagaaca attgtttaaa 240  
 aattatttag ggaaaatgaa gcaaaattgt tttcaatctg agattttaac agccagtgc 300  
 ctctgttcc tcagctgaaa gtccccctca ttctgaatgt ctgcagtatg attgaattgg 360  
 ggagcagtta ggttccaggg acatattcac tcctgttttg ttctcccatc aatctcagcc 420  
 ctttcggtga ctgtttgggc aaagcctccc ttgtggtaga agatgcctca cttctgggga 480  
 gaagaggctc ctcatcttgc agacaagaag cagcaccac tgtttcttgc tccaaaagcc 540  
 attaacatta taaactggcc agttgcagtg gctcaaactt gtaatcccag caccttttgg 600  
 gaggttgagg cacaaggatt gcttgagccc aggagtttga gtacc 645

<210> 10  
 <211> 564  
 <212> DNA  
 <213> Homo sapiens

<400> 10  
 cgcgccgag gtacctgggc ttaacagtaa tagagaacct catttatacc atacagacac 60  
 agcaacttag gaagacagca ctgatagcat ttagctagtt gtaaccaa at ccaaatatgt 120  
 aaaattgaga attatgatta acatatgcaa ctttagtaat aggaatagat gataattttc 180  
 ctgtattgtt tcaaataagt gactgttcag ctgggatcca ttggattata atttacaatg 240  
 tcacataata ttatgtttt caatattgat gagtgatgta aacaatataa agttggcagt 300  
 ttgtagtagt tcagtatcct agaaatacat tgaacttcat aagtatcagt tcatttttaa 360  
 gcatacagaa ttgaactgat acttactgaa atcataaact cagagggaaac aagcccatct 420  
 ttatcactaa ttacttagct tgaatacttt tctattttta aataatccta attattgccc 480  
 tttcaattat agtctactgt atttatttat atgggatcaa caggtattta tcaaaccatct 540  
 actgtgtgcc cagcactacc tagt 564

<210> 11  
 <211> 593  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (593)  
 <223> n = A,T,C or G

<400> 11  
 cgagggtgcct cgccctcgggc attttcttgc agcaagaagg gacgcacatgcc tctggcataa 60  
 atccaaccag agagtcaccc ctctcaagct gatttttttaa aaatctagat attatttaga 120  
 tcattttcagc aaattcttaa tgctttggcc ttccacagta agatgttgct taatcggctg 180  
 gatctcccc ctccttgcca aggagactca attttgcagt tgcccatatc tgccatagta 240  
 aatcggttgct atactaaagg ttctgggagg gtggggacag aatttccccg gtgctaattgc 300  
 ggcaactgaat cgcaggaggc tgccatgcat ttcttcagtc atctacaacc aagaattctc 360  
 agagcagtc ctcggcagcc ttttgaagct gtgctagagc agaaagctgc tattgntctc 420  
 atctctcaac aaggaaaagg tcaaaccttg cctctttcaa ttgaaagat ttttttttat 480  
 ggtggtgggg ggaagggatt gcaatcttga tntcgaagt aactttgagg atttgagtg 540  
 gtctnccagt ttaactgca gatcaaatca cagaagccct aacgcctgca tnt 593

<210> 12  
 <211> 602  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (602)  
 <223> n = A,T,C or G

<400> 12  
 acacacaatt ccactctacc acccaacatc aatgagcatt tattgagcat ctactgaagc 60  
 tcacagcatt gtgcaggcag gatacatatc atacaaatgc tgtttcctcc tcccaccaa 120  
 tgaggggagaa ttgatgaga tttttaaaaa ttctcctag ttctacaacc agtattgtat 180  
 actgatccaa tttggaagtt taagttaaata ataatcaaa ggattccagt tgaggaaatg 240  
 gtcccaactc cttggaaagt aaactagctc ggtcaccagg ctaggttacc cacgttgtaa 300  
 ttgcttgatga ttgactactc caccgtatta atgatgaagt gcccccgact tgagatgcag 360  
 gcgttagggc atctgtgatt tgatctgcag tttaaactgg gagaccactc caaatcctca 420  
 aagtttaactt tgagtatcag attgcaatcc ttccccacc accataaaaa aaaatctttc 480  
 aaattgaaga ggcaaaagt ggatcctttc cttgttgaga gatgagacca ttgccgcttt 540  
 ttgntntagc caggtttcaa anggttgcca nggactgntn tganaatctn ggtgganaaa 600  
 an 602

<210> 13  
 <211> 487  
 <212> DNA  
 <213> Homo sapiens

<400> 13  
 gcgtggcgcg gccgaggtac tggaggccat ccagcccata ccctggcggg gggcaaacct 60  
 cagatgcctc cttcttggtt ttcattgggg accaggatcc atcttccatg aattggatct 120



catcacaatc	tgaacaggaa	ctaagaatct	ccataaataa	accatcaatg	ataagagatt	180
catagggagc	cttcttgtca	cacacaggac	atgtccatgt	aggcttcttc	tcattcatct	240
gtagataaag	ggcagcatcg	aagctctgca	ggtgggcgca	ggtgagggca	cgacaaggga	300
cagtcaggcg	catcttccct	agcgggcaca	tgagtgcacac	ccggagactt	gtagtggcca	360
cctcactgtc	agggtcagca	gtcaatttct	ccttgatcag	tgcccgcgag	tggtctgggt	420
tccggatacc	ctttgtctctg	agtttttcta	gaagggttcc	tgagtcacac	tgcttcacca	480
ggtacct						487

<210> 14  
 <211> 300  
 <212> DNA  
 <213> Homo sapiens

<400> 14						
acagaaatc	ttaactgctt	atgaaatgct	gattgttaaa	cagcatccac	agctattttg	60
tgttggttcc	ctgacccac	cctgaagaaa	agaaaaatta	tggcatattg	aaaacagcag	120
tatgatgtaa	gagaaaagat	cacaaattcc	ttgagggtgg	gtcttttcca	tactcataag	180
cctatttata	atattcagag	taattttattg	acacatatta	atattccctc	ctatcccatt	240
aattgccaaa	tcacaaaca	tttattgagc	acctactctg	tgtagggtgt	aagcagtagc	300

<210> 15  
 <211> 882  
 <212> DNA  
 <213> Homo sapiens

<400> 15						
acctcataac	aaatgcctgc	catgtgttcc	agattcacct	tctttctttc	tgccccagcc	60
ctggaatcag	ctgcttctcc	aagcactcag	gactcctctt	aacagagaat	gataaatact	120
tagaaacccc	tgaggcccgg	tgtgctcagt	gttctaggct	gtcctccttc	taagcccttc	180
tcgtggccag	aaccacacaa	agtatcatca	cgacagcttt	atagtaagtg	ctgggtgtttg	240
cagggcaaat	ggcctcttcc	ttcacaagtg	ttttaattaa	tcctggactt	gcactcttct	300
cagtgaattc	tagtcacctt	gtcaggaaaag	agaagtggct	ggatgtcgat	gggaacgtca	360
ttgaatgtta	agagcaactt	tgggagacct	gacacctggc	atcttccttt	ctctgaacat	420
agaggagaat	taagcaaact	ttccttaaata	gtccttcaat	aaagtttata	tattttctgc	480
atgcagatct	tatctgtctt	aaaattttacc	ccagatacct	ttttgtact	gtaagcatta	540
tgttttaaat	tacattttgt	aaccaattaa	attgttgggt	taacaaaatg	aattgatttt	600
atattttgat	cttaaatgtg	ctcaactctc	taatctgttc	tgagatccct	atttaggaaa	660
ttacatcaca	tcacatgcc	gtaacagcag	ttttatttct	gcctttttca	ccctctgccc	720
tgctgaaaac	agtgttgtga	ggctgaggat	gatgtgggtt	acacaaaact	tggctgcact	780
gcagggggga	atggaaatct	acataaccac	cttggaaaaa	tcgatatgta	tcaatatgca	840
gacgtctgcg	ttatcctgca	gaactggaca	tttgcacgta	cc		882

<210> 16  
 <211> 568  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(568)  
 <223> n = A,T,C or G

<400> 16

```

gg tactcccc gctttacagt taaaaccagt tttctgggaa catttg tcaa acacagggaa      60
ag gctgtcct ttttaagttag tgtttactgc atttcaccta agactaaatg gacaaatgaa      120
ttataaattc atttttttagg aggcataata aacttttgaa atattttttc ttaattagag      180
ggaagaaatg agcaaaaagag aacccgaggc tctagctaga agcccgtgtt tctctgccct      240
aattgcatca aacaatgcct taataatctg tgtcttcatg tgggaggcat ctactctgtc      300
ctctactttt tcaacttttat gcaaactcag gggaaactca ggggaaaaaa tgattctatg      360
aaattataat tagagccata tttctagatt ttaattttca acattggcat ttattaattt      420
cctgcagctg ctgtaacaag ttaccacaaa ctggtaaaaa tggcttaaaa gaacngaaat      480
ttatttttct acaggtcaag gccggaaatn ccaaactctaa gcatcanggg ggtgggggtcc      540
ctttggangn tcccanggn ntttttcc

```

```

<210> 17
<211> 584
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1) ... (584)
<223> n = A,T,C or G

```

```

<400> 17
acaactgaag accctagaaa taagggtttc aaccctggtt gccattaga atcatgaaag      60
agcccccgag atttggttg aattggtctg cagagactcc aggcccttc ttttgaagct      120
ccacagatga ttcttttctg cctgagggga ggtgctgagt tcccatcacc caccagcttc      180
atcctacaca ngtgcaatna gaggcctagt gagagtggca ctggggggtg gccccccagc      240
gagtgccaaag tagatccac caggcccttn cttagggcca gaggttctag aaactttgat      300
gaatgtngca ataaccaggg ggtgctctga aaaggnctta nggctgggct gcacctgnta      360
aaatnaagcc cagtctttct ggttgggacc agaagattcc naagggcagc ncgctcttta      420
aaaaccaagt gcctttctgn taaacnaatc cttaggnccn ttatgtctgc agttnttaag      480
ntaanggggt ggtaagntan taacntccat taanttttag tntacactta agcttttggg      540
ggtatcngnt tnnagtgnna ttangnagtc tttcacagggt nggtt

```

```

<210> 18
<211> 560
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1) ... (560)
<223> n = A,T,C or G

```

```

<400> 18
gg tactcaaa gcttggactc catccctgaa ggtcttctctg attgatagcc tggccttaat      60
accctacaga aagcctgtcc attggctgtt tcttctcag tcagttcctg gaagacctta      120
ccccatgacc ccagcttcag atgtggtctt tggaaacaga ggtcgaagga aagtaaggag      180
ctgagagctc acattcatag gtgcgcagcag ccttcgtgca tcttcttgca tcatctctaa      240
ggagctcctc taattacacc atgcccgtca ccccatgagg gatcagagaa gggatgagtc      300
ttctaaactc tatattcgct gtgagtcag gttgtaaggg ggagcactgt ggatgcatcc      360
tattgcactc cagctgatga caccaaagct taggtgtttg ctgaaagtgc ttgatgntgn      420
gacttaccac ccctgcctna caactgcaga cataagggga ctatggattg cttaacagga      480
aaggcactng ntctcaangg cggntgcccn ttgggaaact tntgggcccc ccccaaagaa      540

```

tgtggnttttn agtttttcnn

560

<210> 19  
 <211> 425  
 <212> DNA  
 <213> Homo sapiens

<400> 19  
 ggtacaaaga gaaaagggtca agacattttt caaatgaggg aaaactaaca ggattttatca 60  
 ctagtaaac tgctctaaaa gaattcaagg gaagcttttt aaaaagaagg gaagttatag 120  
 cagaaggaaa cttagaatgg caggaataaa gaaggcataa tgtatagggt aaatataata 180  
 gacttctctt gaggttttaa aaattacatt tgttatttga aagaaaaaaa ttaacgttgt 240  
 tgtatgtgat tctctgtaga ggatatacag ttttttttgt tgttcttgtt tctgtttttt 300  
 taagggtgaag tctctgtcac ccaagctgga gtgcagttct gtgatcatgg ctactgcag 360  
 cttcacctcg gggttcagggtg atcctcccac ttcagcctct tcagtaactg ggactacagg 420  
 catgt 425

<210> 20  
 <211> 655  
 <212> DNA  
 <213> Homo sapiens

<400> 20  
 tgttacttcc caagcactgt agggcgtaag gaaaatctgg tccttatcaa atcccaggag 60  
 cttctgctta gttggggaag aaattacatg aagcaaccag aggttataag gccacacttg 120  
 tatatcgtgc accctgtgtg gacaagatta gggactgttg agagaggagg aaaccagtag 180  
 agagcaaac tctaccagg ctccttgtaa gcctctgggc tccccgaga gggcctcgct 240  
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 ttgtgtggag gggctctgag gcctctgagg ccagatgtgt aaacagtgtt gaggttcagt 360  
 aataggatga agtcttcagg tgtggagcag cccaccttgg ctcttcccat gtctctgtgt 420  
 tacttctcat attctgtgtt cctttcaaac ttcaaggaca gtattaattt atactagtat 480  
 ttcttcctca gttttgtgac ttgaatgcag tgagtgcctt agaggatcca aggatgaagg 540  
 aatgcggggt ggtgggttctc tctttcagaa tgggaacttc ccaaaaatgg ggctgcgtct 600  
 cgcctctcag taggttccct acctctgggt cttccacct tcaaaatctg gtacc 655

<210> 21  
 <211> 566  
 <212> DNA  
 <213> Homo sapiens

<400> 21  
 ggtacagccc tttcttttgaa tggggatctg gggatgcaga ggagcataat gaggctttta 60  
 taattacaaa catgctcttc tctagctctt aaggttatgc ctaacgctca tttgctcttg 120  
 gctaaaataa ctgagaaaaa aagtgagtag taaaaaatg ctggaagtct gaaaatgggt 180  
 tagacagaac ttcatctctg aagttttagt ctgtagccag attttaattc tggcctgttt 240  
 tgggttttag atgatagatc ttttagtgtg tcaacaggaa tgtaaagttt gtattaacat 300  
 ctaggggtgat cacctgcat gctattaagt cagcatggta taattaaaag ttacatatgt 360  
 aggttcagag cctcttagca cagtgttaca ttgtaagctc ttggagggca ggaatgagat 420  
 tctagtcctt acggaaatgg agtttgggt tctatcccta gcattcattc tagtgccatg 480  
 cacgtggtag gaattctgta aatatttgtg aaag...aatga atttctgcct gtagggttca 540  
 gcagtgtata cttaaagtgt atgtgt 566

<210> 22

<211> 269  
 <212> DNA  
 <213> Homo sapiens

<400> 22  
 ggtactaata gcaaggaata atcctaaaca ttttcccaat aaactgacta agcctcaaaa 60  
 ggacagctta ggaaaatgat taacatgcag tttttctttt ttcttagcca attcagttct 120  
 acttagataa atctgggtgc caatcaatac atatataaat taattttttt ctgctcaatt 180  
 actaccattt tttctttttc accttttccc caattttctc tagcaacact tttcctttgg 240  
 tttgatcagt tgaactcaaa aggttttgt 269

<210> 23  
 <211> 815  
 <212> DNA  
 <213> Homo sapiens

<400> 23  
 gaggtaccct tcatccatca ggactgcacc tcctttccca tgagccttct ggggtcacat 60  
 tctcctaact gcagctactg ttgctgtttt acttatcgag ggccattac gtgccaggct 120  
 ctgcgctgaa cgcttcacgc ccactggatc atttactcat aatagctcag taaggtagtt 180  
 accccaatta gccccatgtt agagaaaaac accaaggcac agaggtagt cacttgtccc 240  
 aggtcacaca tctaggaagt agtagaacca ggactcagct cagggtccaa gtctcaacca 300  
 tgggcccagtc tgctcatctt agtcaaacc ccaggctgca ttctgtggtc cagctactgg 360  
 atcctgcaac cttctcagac tctatccatg aagccaagtg cacaggatct aggacatcag 420  
 gtccagaaaa attggggcca cattcttctg gacctgcaga tgggcaagga ccagactcta 480  
 gcctgaacag tgagatgcag cccagagaag tgggaatcca cagacagagc ctggcctgag 540  
 actcctactg agactgccc tgtggccact cggggagttc ccgtcccctg cctgatcagc 600  
 agtctttttg cttccccctc caagagagct ggggggcatt cctccaggaa gcctgatatg 660  
 taacaaactc ctttccatt tcttgctttg cttaaatctc caaagtccct ggagctgaag 720  
 ccaagcgggc ctcattaggt ccactttaca gaaaagcaaa ctgagtctca aagaggggaa 780  
 gtcactgagc cgggtacctg ccgcgggccc ct cga 815

<210> 24  
 <211> 555  
 <212> DNA  
 <213> Homo sapiens

<400> 24  
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 aattatgatt aacatatgca actttagtaa taggaataga tgataatttt cctgtattgt 180  
 ttcaaataag tgactgttca gctgggatcc attggattat aatttacaat gtcacataat 240  
 attatgcttt tcaatattga tgagtgatgt aaacaatata aagttggcag tttgtagtag 300  
 ttcagtatcc tagaaatata ttgaacttca taagtatcag ttcattttta agcatacaga 360  
 attgaactga tacttactga aatcataaac tcagaggaaa caagcccatc tttatcacta 420  
 attacttagc ttgaatactt ttctattttt aaataatcct aattattgcc ttttcaatta 480  
 tagtctactg gattttattt tatgggatca acagggtatt atcaaacatc tactgtgtgc 540  
 ccagcactac ctagt 555

<210> 25  
 <211> 413  
 <212> DNA  
 <213> Homo sapiens

<400> 25  
 ggtacaagct tttttttttt tttttttttt ttttcctttc attgtccagt ccccatgaat 60  
 tattttatttg ttatttaaatt caactgaatg agattttcaaa gcaacgaaaa ttgaagttca 120  
 aatgaaacca aattaccact ctgagctcca ggtggccctg acagcccagt tttgtgaagg 180  
 gcccctgagg ctgttctactg aatctgagat gtcaccaggc atggagggtc tctgatcagc 240  
 atccagagct ccagagtagg gagcaacccc tcaccaccac ttctggggcc caggcaaggc 300  
 agagaccaa aagacccctgg taagggtccc caacctccat gttcatttaa aaaaaatgtt 360  
 taaaactgac aaataataat tgcataatatt catgggggtcc atcatgatgt ttt 413

<210> 26  
 <211> 638  
 <212> DNA  
 <213> Homo sapiens

<400> 26  
 acttagaatc gtgtgtccat ctgaagccag tgcagaggcc aaagtcagtc aatttaatat 60  
 gaccatcacg atcaatcaaa atattatcag gtttaatatc tctatgaata aaacccattt 120  
 taaggaacac ctttcaaact gcacaggtaa gttctgctat gtagaatcgt gccagacttt 180  
 ctggaaagat gccatttcta attaataggc tcatcatalc acccccagga atgtagtcca 240  
 ttacaaagta taaattgtcc ttatcttggg atgaataata tagacgaact acccattcat 300  
 tgtcagcttc agccaggata tctctctcag ccttaacatg agcgacttga tttcgaagaa 360  
 gaacatcttt atttcgaaga gtttttgttg catacaaagc cttagtatct acttttcttg 420  
 ctagacagac ttcaccaaatt gtccttattc ctagtgtctt tatcttcaca aacatagact 480  
 tgtccatttt agccctttta agacggatgt aattagattc tttttggcaa agcatctttc 540  
 tcatttgatc ctgggcatct tgagataatc caaccgcat catttcattc tctaatttgtt 600  
 ttttacgatg tagacgtgc tgatgagatt tgagtacc 638

<210> 27  
 <211> 236  
 <212> DNA  
 <213> Homo sapiens

<400> 27  
 ggtacacgtc gttctcttca agatctcata gacaatcgtg ctccggggtt tgctgtcgaa 60  
 aaaggaatcc ttatcagaca agtcaaatag atgtctcttc tcccgggaga agggatagga 120  
 gagtctcttc atgggtctggg gctgtgtctc agccactttg ggctggatgg gatctgtgat 180  
 tttctggagc acagagttga tttttttcag gaggccacgg gtctcattaa tgtgggt 236

<210> 28  
 <211> 607  
 <212> DNA  
 <213> Homo sapiens

<400> 28  
 ggtaccacgg gaaagatcag gactttggct gcaccctttt ccagctcctc catgttacag 60  
 atcatatggg cacaagtggg aaaaatctcc acggctcggg aacgggttcg aataccatac 120  
 acctcagcca tgggtgaagat cttatacatc tctgggagaa tgacaggagc aacaaagtgg 180  
 catctgtgtg tctgttactt tcacgagtga attctgtcag cacacgcatg gctccatgga 240  
 cggcatttaa gtctccgctc accaacaatc ccatgagcag gttgaagagt tggggccaag 300  
 cttcaggcca gtcccagctg gcaatggctg aactgcata ggccacactg gagcgacttt 360  
 tgettatcga ttctctcaac ccattaggca atagctcccg gataacaatt tttgcccttt 420  
 ctgtagtttc aggaggccta aatttctctg attgggcaca ccagtgagtc tccacatatt 480

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gtttcaagat gactgatgcc agctgaagga ttgccagtgc cccctgggga tctacagtca 540
gttctgccaa gtgaacacca aattcctccg tcacctccag caccttaatc tgttcttcag 600
cagccgc 607

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<210> 29
<211> 612
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(612)
<223> n = A,T,C or G

```

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<400> 29
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gttttttaag tttcagggtca gaaatgtgga tgtgaaaaaa tgttttttaa gaccttcaca 180
ggcttactag tatcacagca ataaatgatt ctaccaggat attcttcgta gacttagttg 240
gcctggaggt agacttttaa ggatatact gtgcttctga ataaaattag ctaagaattc 300
aacattatgg aattcaataa attccagggg gaaatcagtg aattaggata cactgcctct 360
taaattctaa accctatata tcccacctgt tgcattgtang gggcatgtgt gcatgtggca 420
tcaaaactag ctgnggaccc ttttttttcc ataaaatttg gncntactca tccttgggng 480
aaaaancctt gaaggnaaaa tctggggtna aaaaaaagct ttgggctgtg gaccaacctt 540
ccangttccc ngggaagggg ttnggacctg gnaaaaannc cntggaantg gcttgggcct 600
tggtactactg cn 612

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<210> 30
<211> 286
<212> DNA
<213> Homo sapiens

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<400> 30
ggtactgtta tcatagcagc actatccaac atgaaagtaa tcttataatt tgcatttgtg 60
cccactccca gctctttcat tttagcttca atccacttca tatttgttgc agaccaaata 120
acaatgtcat aatcttcata ggcagatgtt agaaattcat gaagatatgg ccgcattaat 180
tctacccag tctctgcaca agacctgtgg tcaaataatg tataatcaac atctagcacc 240
aaaagctttt tcccttccct gggaggattc aaaatttcca ctttgc 286

```

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<210> 31
<211> 606
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (1)...(606)
<223> n = A,T,C or G

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<400> 31
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aattcaaadc ttggctgtgc caccacttcc ctgggcaagt cacttctct ctctgtgtcc 120
atttccaaat ctttgaaatt cagtttagaaa catcacttta aaaacagggt tgttgtgaag 180

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atatttatgag	ataatgtata	aaataagttc	ttaccaagta	tcagctatga	tattttatgat	240
atatttagagt	tattaattat	actgtgagga	ttaaggaact	tggcagagga	atacagtagg	300
tgtctaaatg	gtatcctaaa	atattattta	aaaataaatg	acagtaatgg	gaataccgca	360
attacttttg	caccaacgta	ataatagtag	gatattttaa	gttgagatca	caggaatcag	420
tgcagatatg	tctcatttta	cccacaggtg	gcgctcatgg	ccgggttaaa	ttctgaaaaa	480
ccttaaaaag	tcccttgggc	gngaaccnnc	ttanggcgaa	ttcccgnnca	ctngngggcc	540
gtctaangga	nncnatttg	ggccaacntt	ggggaaccng	ggcanaccgn	tcccggggna	600
aatggn						606

<210> 32  
 <211> 615  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(615)  
 <223> n = A,T,C or G

<400> 32						
ggtactcatg	catcttcatg	agcagctctc	ttatcttctc	agtaacatag	tcacctcttc	60
actggaaagg	tctgtatttt	atactctttt	gggttaagtc	actggcagac	agaaacatca	120
atataccta	tcaggatgga	tgccacagtc	tgcccagtta	gctcattaat	tagataattc	180
tttaaaaaa	ttgacaaacc	attaattaag	agctgattat	tcacacatca	aacaattctt	240
cacttaaa	agaggatttc	tttaaatagc	agctccccct	ggctgcattt	atctctttgt	300
gtaagtttat	tagctatttg	gcagagaaat	ttcagaatgc	cagctacaag	tcagtgcagt	360
tgaagaacag	aatgtaatgg	agggaaagta	tttctggaag	catggcattt	attccaagaa	420
attatctaag	aatgnaattc	ctttggaaag	tgcttaatat	aattatatat	gnaatcncaa	480
ttaatttctt	aaataantct	ngggaaatgg	ccagattttc	tggtttggaa	aagccccggg	540
ntttngaate	caaataantt	gnccaggctt	tttnnntnng	nccnnggtng	accnngggtt	600
gattcaangt	ttcnn					615

<210> 33  
 <211> 297  
 <212> DNA  
 <213> Homo sapiens

<400> 33						
acagacttcc	atctcccca	catcttgaag	atgtatcaat	ttttttaaat	taagaattac	60
tttaaacagc	actcatttca	gaagataggc	agaggttatc	aaacttctgc	tccaatcttc	120
tcattattcc	aagggtcata	aaaaccactt	aggaagacct	tggttactgt	gacacatcac	180
agctataagt	gtaggtggcc	tagactctcc	ctatctctta	gctgccctga	gtcatgtgaa	240
ataagatagt	gaccttctcc	atcatcccta	gaggctctct	ccccgagaga	gagtacc	297

<210> 34  
 <211> 468  
 <212> DNA  
 <213> Homo sapiens

<400> 34						
actgttttagt	gggatccaut	ttatacaggt	gacggtcagt	gacaaaaatt	gctctgtctt	60
ccaccttact	aaatcgattt	accttacgga	cgtgacagga	aaagaggaca	ttcatgtatt	120
tgtccttccg	tttcaattca	ttagcaacag	ggacaaaagt	gcctgaggtc	tgagggtgat	180

ctggccttga	agcaagatag	ttgccctccc	aggccctctg	gagcccgagg	tcagcccttt	240
gacccttcaa	catttccacg	gctgcaacct	ttgccctgac	ctggggcagg	tctgaggccg	300
gaatgctctt	gatgagctgg	gatgctctcc	atctattgaa	aatcgtctgc	agggcctcct	360
caaaacggcg	aagaacttta	ggaggggcttg	gccacttcac	gtgcttcccg	tagtctcgca	420
tggctctgac	gccatggaaa	cgtctggcca	cctcgtggat	gtacctcg		468

<210> 35  
 <211> 314  
 <212> DNA  
 <213> Homo sapiens

<400> 35						
ggtacttatg	gctccagata	aaatctctgg	tggccacatt	attcaagact	ttttaaaagt	60
ctttatctga	aatatcttca	tagacatgaa	tatgaaagtt	ctgaaaattg	tgttcaatgg	120
cccgtgtgtc	ccagaagatc	ctaattgtaa	gatgcatatt	tataaagtaa	tttatagaat	180
aggattaaac	atatgtagaa	ctttattaag	aaaatataat	gactttggga	ccaattacag	240
gcccttgaac	agccacaata	ggctcaggag	ggctgtgctt	ctgtgtaaag	ttccctccca	300
gacaccacca	gggt					314

<210> 36  
 <211> 600  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(600)  
 <223> n = A,T,C or G

<400> 36						
acccaatgtc	atgggaatga	tgtgcctgtc	acccccattg	gacaagctgg	ggaacagcca	60
tagggggacc	agcttctgcc	agaagttggg	gtctctcttc	aatttccaca	actatgacaa	120
cctgaggcac	tgtgctcgga	agttagaccc	acggcgtgaa	ggggcagaaa	ttcggaaacaa	180
gactgtggtc	aacctgttat	ttgctgccta	tagtggcgat	gtctcagctc	ttcgaagggt	240
tgcttgttca	gccatggata	tggaaacagaa	agactatgac	tcgcgcacag	ctctgcatgt	300
tgctgcagct	gaaggacaca	tcgaagttgt	taaattcctg	atcgaggctt	gcaaagtga	360
tccttttggc	aaggacaggt	ggggcaacat	ttccctggat	gatgctgtgc	agttcaacca	420
tctggagggt	gtcaaaactgc	tttcaggatt	accaggaatt	tctacacaac	cttttgaaac	480
tcaggcttga	gggcacaann	tgaaggccct	nttcnaaang	aaacttttaa	aaagccttng	540
gttttaaccc	ncgggtcant	gnnnaatccc	tggtttaana	aaaaancctn	gacttggccg	600

<210> 37  
 <211> 516  
 <212> DNA  
 <213> Homo sapiens

<400> 37						
ggtactgctg	taggaaagaa	attaaggaca	gttagtatgg	gcctgtgaat	tctggcaaac	60
atgttttaaat	caattacaat	tatgcaagta	aaaaaaggat	atcccctact	aattcatgca	120
ggctgaaaag	tctagtatgt	aaacctgcag	cagaatctaa	ttttaagaaa	caggcaccta	180
attttgattg	tgaaaactac	tcacctgagg	aaagcttcca	tcaggctcac	tatgcccctt	240
gtgctgactt	gcacactaaa	attagcaaaa	cagactccaa	ctattaaaaa	tatcaaacac	300
ttcgtatata	tacttttgtt	ttaactttta	gtatgcttag	agcaaagtag	gtgcctttac	360



taagctatat	ttagagcact	atgggggggag	ctctagtgtg	agaaacagtt	tctcaagggt	420
aacaatccta	aaaatctagg	atgtggaatg	aaaactttca	ataatttgaa	agtattttga	480
gcagaaaaat	acatttgatc	caagtataga	aagcgt			516

<210> 38  
 <211> 319  
 <212> DNA  
 <213> Homo sapiens

<400> 38						
actgaaagga	tgaaaagggt	gtgtcatggt	ttggggagaa	tcttacttct	caaatggaaa	60
ttgcactttt	tgctgaatcc	tttgcatttt	tttggtagta	agcagttcat	tgagtatcag	120
gtcctcaaag	gaatgagttg	gcccggttag	gggtgggccct	cttgacctaa	cttcagaggg	180
ggccttggct	cagtaggtgt	gaatcagggg	agccacattg	tcctcagggt	gctgtatgaa	240
gctgggtgtg	ggcggattcc	tcccacacct	tcacactggc	ctgcctccaa	ctcatacaga	300
tctcggagcg	gtcgggtacc					319

<210> 39  
 <211> 592  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(592)  
 <223> n = A,T,C or G

<400> 39						
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cattaataga	ggcttctatt	ggggtttaggc	taaaaatctt	ttgtaaaaaa	ttttaaatga	120
cactgctgat	ttttctccgt	taattatcag	tttataagct	aataaaaaact	ttggcttgat	180
attacattct	agtggttaaa	tttgtcatag	aagggaatatg	tgctgagtta	cttatgtatt	240
gtaatcttga	gattacgatt	ttttatttga	aaattagaca	aagtttggtt	ttatttttta	300
tttcatttta	ataattgagt	tcagattaaa	tgggaaggct	aaatttgaat	tcctgttttc	360
tctcaaaata	ctgnttttct	attattttta	ggcatccctt	ggaggtctaa	aattgggcat	420
ttataggtgt	tgatgaaagc	acacccgatt	taaagaatgg	atgaccccc	ttctgnatna	480
aacctttaat	ngaattttta	annccaaact	ttgggtccct	taaacctngg	acctcctttc	540
ccnaatccc	cttaaaaaaa	ncntnggcnt	tngcanaatt	cnntttgccc	aa	592

<210> 40  
 <211> 577  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(577)  
 <223> n = A,T,C or G

<400> 40						
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acattgtttt	tagaagagga	caaatcctta	aaagtaacat	cagacccaaa	ggttgagcag	120
aaaattgaag	tgatactga	aattgagatg	agtgtggatg	atgatatcaa	tagttcgaaa	180

gtaattaatg	acctcttcag	tgatgtccta	gaggaaggtg	aactagatat	ggagaagagc	240
caagaggaga	tggatcaagc	attagcagaa	agcagcgaag	aacaggaaga	tgcactgaat	300
atctcctcaa	tgtctttact	tgccaccattg	gcacaaacag	ttggtgtggt	aagtccagag	360
agtttagtgn	ccacacctag	actggaattg	aaagacccag	cagaagtgat	gaaagtccaa	420
accnggaaaa	ttccaagaac	tcgngtcctn	gactggatct	tgggganaac	ccttggttnt	480
taaaannngg	acntttttnc	cggcttgggg	cccntttaga	tttcaaagtt	tcangaaccc	540
aaacggtcct	tnattaaanc	cggngattgt	tcgaagg			577

<210> 41  
 <211> 490  
 <212> DNA  
 <213> Homo sapiens

<400> 41						
ggtacacaag	agtataggtg	tataaaacta	aatgaagtca	atcatattga	ttatcccccc	60
aaaaaaaaata	taatctaaag	aataatcagt	tcctaaataa	ttgaaagctg	cccttacaaa	120
ataaaacaaa	agaacacaca	tttcgttgtg	ttgccaggcg	tggtctcgaa	ctcctgggct	180
caagcagtc	tcccacctcg	acctcccaag	atgctgggat	ttcgggacat	gagccaccac	240
gcccgggcca	aagctgcctt	tttttaacat	ggattttttt	tccccattc	gttggtgctca	300
gaagtcattt	ccctcttattt	ttctctgcta	atgtgagctt	taacaaacct	gtttaaaacg	360
acaagccttt	aatcaactgg	ggtgttttgt	tttgtttttt	tcttattttc	ttaggagtca	420
gtggatcggt	ggggaaaatg	ctgcttacc	tgggcccctg	gctgtagaaa	gaagacacca	480
aaggcaaaagt						490

<210> 42  
 <211> 571  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (571)  
 <223> n = A,T,C or G

<400> 42						
ggtacttgcc	ttttaacttt	ccccacatt	actgttgagt	catggaataa	tgtttaagtt	60
gttatttgca	tggaaattaa	gtaggctggt	tatttatcta	aaggaatcaa	gtccactctt	120
ctgcctgcaa	catttgttca	aaaactaacc	aaggtaaaat	atttatttga	aagcccaact	180
ttgatgttaa	atattcttga	ataaatctgt	tattttaaga	atatcacatt	attcaatgca	240
tataaaacta	tcagaagtta	gtaaatcata	ccagcactaa	aaataagaca	attggaatat	300
atttttagcat	cagttttaca	acaactttat	tatcaacaga	aatttttagct	cttttctttg	360
caagatatat	cacagctgct	ttgggcagta	gctgaagccg	aagtatgaac	agtccatttt	420
gtttcttaaa	atttgaagtc	gtgtctgtcg	tagcattttt	actaccagca	gtatgttact	480
taaaaaacta	catggctttc	cttgaattta	tttgaccgna	ttatgtaata	gacttgaaac	540
aattgccatc	tttgtagnta	tgcttgggtt	c			571

<210> 43  
 <211> 708  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

&lt;222&gt; (1)...(708)

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 43

agg	tactgca	aaaatgaagt	attattctct	aagtattcat	tttatccctt	tcatttcagc	60
aaa	atcacac	atttgaataa	acaggatcga	aatacgacac	ttgtctttcc	tcttaattta	120
agga	atatat	tgttttagatt	attgttcata	ttagacaact	gcctcaaaaa	tgttttaatg	180
ccat	ccaata	aataaacttt	tgatagatta	tgactttttt	taattttaag	ttgttaagaa	240
tatta	actttt	gagtcctcta	ttaatattct	aaaagctagg	attcaattca	gcagtttcct	300
ataac	atttt	agaacccaag	gcataactac	aaagatggca	attgtttcaa	gtctattaca	360
taata	cccggt	caaataaatt	caaggaaaag	cccatgtagt	ttttaagtaa	ccatacctgc	420
tggt	aagtaa	aaaatgctta	cgaccggacc	acgactttca	aaatttttaa	ggaaaaccaa	480
aaat	nggacc	tnggtgccat	taccttttgg	gnntttcaag	cntaccttgg	gccccaaaag	540
cca	agcttgg	nggaatataa	tccttggcca	aaggnaaaaa	ggaagcctta	aaaantttcc	600
nggg	ngggaa	naantnaaaa	gttnggttgg	gnaaaaaaccn	ggangcctaa	aaaattttta	660
tttn	ccccaaa	ttggggccct	naaatttttn	aaagggcnng	ggganang		708

&lt;210&gt; 44

&lt;211&gt; 632

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(632)

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 44

ggt	actaggt	ctattaaatc	tacctgctta	aaaagggtttt	gaactgaaga	ttccaggagc	60
tgag	cagctg	cctcttcaaa	ggttttgaga	gtaacaaatt	ggacctggta	gtttttgcta	120
acagg	gtgga	ggccgttgat	catgccctca	gtggtgatga	tggccaggta	tgcaccgcag	180
gggt	cactg	ctatcccgtg	agtccttact	gagccaaaca	catctgagag	tttaatcaac	240
tgg	gttcaa	acttcaatgc	aacatctgtg	aaaatgggaa	tcagctgcct	cacctttccg	300
tact	ggagc	aagtatagac	tgttccattc	tgtttgtctg	cagtcattgga	gacaattggc	360
agt	gagttga	aggcctgtga	catgggaatt	gtgaaccatt	nagccctgct	ttggagatca	420
gaag	angaca	ccaaaattca	taagancctc	ttgcagccca	cttactaaag	ctgcnactac	480
act	tttttgg	aagggatgaa	taaangtggc	ccacatttng	atactgngca	cnagntaact	540
tgg	gnccatt	tcttttccnc	aagannacca	gggttgnctt	aaagnggaaa	tannctttna	600
cng	nttttna	aattnccng	gaaaaatttt	tt			632

&lt;210&gt; 45

&lt;211&gt; 664

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 45

ggt	acccggt	ctacagtaga	gaggttttat	gaaaataaaa	tacaagacca	aattcaaaga	60
gct	ttaaaaa	ccacagagcc	agacaaatgt	gagagggttat	tatgagcaaa	caatgacatt	120
acaga	aagtga	aagtgtcaa	gtgccatcaa	gaacaagggc	tctatttcac	tcccatgtgt	180
cacc	ataata	aagacagagt	ccctgatcct	aaaggcatca	attttgcccc	actggaagcc	240
tta	attgtaa	ttcattaata	agcagcatc	ctaaaagtta	ctgccgtttc	taggaatcca	300
aaca	actgggt	tttaggtcct	aaagaatttg	aatcattaag	aaatttaaag	taccactct	360
ggg	ccagttg	atggctgcga	agagagcaga	aggggtgctg	ctgtaggaaa	tcaatggctc	420

ggaagaccac	actgaggaag	gtgtgagttg	atactggaag	atctccaggt	ttgaggcatc	480
ttcagaggta	tatgggtggt	ttgtgtgtgt	tgagggtgtg	gtagcgagc	agctccctag	540
ggaattagaa	ggttttattg	aacattttacc	ctgtgacagg	cactgcaggc	attcagcgcg	600
cagtgtcatc	ttcattttac	aggtgaggaa	aagactcagg	ttcaagtaga	tgggtcaaggc	660
cagt						664

<210> 46  
 <211> 633  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(633)  
 <223> n = A,T,C or G

<400> 46						
ggtacgtgtt	tatgggatgg	gcacactaga	tgagatggaa	gaagatgtgc	cagtgatgtg	60
gagacagggg	gtgtgggaga	ggagcaggta	gagctcagag	acggtgcact	taggcctgtg	120
gtcattgggg	gtgacccaag	tagccagcag	ctgcccagcg	ttttgtgttt	ctctcctggg	180
tccttaggag	tggaaattgt	gtaagaacaa	tgtgtgaggt	tgtggcctgc	ggggcagtta	240
gcagttgtca	gaccggtgcc	tggaaagtgtt	tcttggatca	ggaaatcagg	actgaaaggg	300
gcattaagt	tgtctggacc	accctgtcat	tgtgcaatgg	ggagatcgag	gccttttggg	360
aggaaagggc	ctgcttaagg	gccgtataat	tgaagtcagt	ggctgtgttg	gggcctttga	420
acctgccaaa	agctgggtgcc	tttctccact	cctcagtgct	tatgccccaa	gtgaggtct	480
agnccaact	ctcccacttt	cctcccactt	tactaagca	cctgctctgg	taggcccagt	540
gctgtatgct	gtgaactcag	gctgggttagg	tgctaattta	ttcaccacgc	cagacattct	600
agtgtctcct	gcatggcagg	cactgttcga	agt			633

<210> 47  
 <211> 433  
 <212> DNA  
 <213> Homo sapiens

<400> 47						
accagttgct	cctccatgat	ggtctgggat	cacagaggct	ccaagtgggg	acttcactac	60
ctagaccagt	cccccatatg	gtccctccct	gggctgcact	tttgccctgc	ttagtctcct	120
gtgttccttg	agaaagtggg	gtcaataaca	cctttctctt	cagggttgtg	gagaacggct	180
cccagccacc	ttctgttttc	ccttctcttt	gagctctaga	ttcagggagg	ggttaaggca	240
agaccagggt	ccagaagctt	ggctgagacc	agaagccagt	gcttactgtg	ctactgccac	300
cttcagcagc	aagggcccca	ccaatcaggt	ccctagattc	aggccccagg	tggagctgcc	360
ctcccgatcc	tagggagcct	ctctacctga	aaggtgcaca	gaaaaacact	gcagaaaact	420
caccagcaa	ggg					433

<210> 48  
 <211> 633  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(633)  
 <223> n = A,T,C or G

&lt;400&gt; 48

acttcttcag	gtaacactgt	aaggatctcc	agcaaaaaag	gcaaagaagt	cacatcattg	60
ctgtatTTTT	ccaccagtgt	ttgcacacat	cccttcagg	aaggcatctg	tagggcaaga	120
tctgctattg	ctaaagccag	ctgcgttaca	ataacaggtg	acaagtcttt	caagttctgg	180
atatgggtta	gcaatgagtc	ccgtaaagag	gcatgagagt	ctgtggggag	ctcataaaaat	240
gaggtctgaa	tcttcatttt	catgggtctgt	gcagcaaaat	agcatgactc	cacatcctgc	300
cggatctgta	acaactggtc	tgagatctcc	catgcatgaa	ccgaacgctg	cagcttccca	360
agcnaaaaaag	aggngccgct	cctttcccg	tgggatctgg	gggtccgtgg	aaanccgcct	420
gcaactggctt	ggtaccacca	ataaaggnc	attnccgaaa	aaaaaanaaa	aaaaaaaacc	480
ttggccggga	ccacncttan	ggcgaaatca	acacactg	gccgtctang	gatccactng	540
naccaacttg	gcgtancatg	gcnnactgg	tcctggggna	attgtanccg	ttcaaattcc	600
ccaattacaa	cccgannta	aannaaactn	ggg			633

&lt;210&gt; 49

&lt;211&gt; 624

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(624)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 49

ggtacccttc	tctcacacat	gtcaaata	gagaggcaga	aggagccaat	ggcaatgggt	60
ccgacttgct	tccaataccc	tgcatgtgg	ttccgctcgt	gctgatccat	catgtgctcg	120
ccacagaaga	tgatccagaa	ggacagaagc	atcgcataga	agatgccctg	tccgatgtca	180
ccaaacagca	gcatccaggt	ccagtcaaac	ccgatggaaa	accattccac	tgggatattg	240
ataaagggtca	tggaaatccc	aaggggcaaag	atgacttttt	tcagaagcac	cgggggtcgg	300
gacatcatgg	tgatcctcct	ccaataccac	accataatga	tgaagatgct	gggccgtaag	360
gaagggtcttc	atggcaaacc	acaccttgg	gaagcctcca	ttttgggtgga	tccccaccaa	420
cccggatatc	ctttatctcc	caattcccac	attgatttct	tcttcttatt	cacaggcagn	480
cggatgttna	aangnaaaac	ttatggccac	agaccatttt	natgaaagga	agacttacat	540
catagtacgg	ccttatgctt	ggatcttgg	anntgagggc	attgagntcc	nggactgccg	600
gcgggcntta	aangnaatcc	acnn				624

&lt;210&gt; 50

&lt;211&gt; 733

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(733)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 50

ggtaccacaa	agacagaagc	ttcacaggaa	gagcgggtcta	attcaagcgg	cctcacatct	60
ctcaagaaat	caccaaaggt	ctcatccaag	gacactcggg	aatcaaaaac	tgattttctca	120
ctttctatta	gtaattcg	agatgtgagt	gctaaagata	agcatgctga	agacaatgag	180
aagcgttttg	cagccttgg	agcgaggcaa	aaagcaaaaag	aagtgcagaa	gaagctggcg	240
cataatgctc	tggcaaattt	ggatgggtcat	ccagaggata	agccaacgca	catcatcttc	300

ggttctgaca	gtgaatgtga	aacagaggag	acatcgactc	aggagcagag	ccnntccagg	360
agaggaatgg	gtgaaagaag	tctatggggt	aaaacatcag	gggaaagctg	gttggatagc	420
agtngatgat	gaccnaaatc	tggantcttg	naagaatgac	cggnatttan	ggntccaaaa	480
atttaaacc	ttangttttg	aaggggccna	aacttnggac	cnnaaanctt	cattgggatt	540
taaccaggtn	ggnacntttt	gggcacccca	ttgacccgna	tttcccccat	tgggaccttt	600
tcgaatttct	tanaaaactt	ggncnngga	aaaaagggaa	cccgggaaaa	agggtaaaat	660
ggaaaaggaa	aaacctggnt	tngggaaaaa	aaaaacnttt	gccccaaaaa	aaaaaangaa	720
aagccccttt	ttt					733

<210> 51  
 <211> 565  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(565)  
 <223> n = A,T,C or G

<400> 51						
acattaagtc	aagattgagc	tttgatttaa	aaggaacata	aatcctttac	attataaagg	60
gaagacataa	atctctccaa	tctaaatfff	ctcatcttgg	atgatgtcat	taaactgcag	120
ctcaaaactga	gattagtfta	gaattttatg	taaattacat	ctttgaacaa	atgagaacaa	180
ataactcatc	tgcagaatat	ataaagaacc	ttcattaatc	aaaaggaatt	agacaagcac	240
ctagtttttaa	aaaataaatg	gtgaataatt	taaacagaaa	cctcaaaaaa	gaaaatatca	300
gagtggccaa	taagcacata	gaaagataca	caacatcatt	agtttttaag	agaactacaa	360
attaaagcaa	ccataaagat	acctccccaa	cactacnaga	atgactaaat	ttttaaagtc	420
cgacagcggt	gtgcccgggt	tcccaatacc	actcagggtta	agtgatttct	ggaanggctc	480
cagaactcag	aaaagctata	cttgctatcc	tannnggtatg	ggttggtacn	gtggaaaaat	540
cccgggttaa	tcaggtaaag	accn				565

<210> 52  
 <211> 637  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(637)  
 <223> n = A,T,C or G

<400> 52						
ggtacgttcc	aaagaaccaa	ctggttcttg	atctgctcct	gagagataac	cttcaaattcc	60
ttgaaatata	ctgcatgata	agagtgagtt	tgtaaatgtg	gggccttcga	tcattgccaaa	120
tagttttatgc	taaccatgtg	atttatgggtg	gggaacttga	ccatgctgtc	agtttgacat	180
cgggaggggc	cgagtgttaa	gtaactaagg	ttggccacat	gggcaatcca	tgcttctgta	240
actgaagcct	aatagaatct	ctagacaacg	aacagcttgg	gtgagcttcc	ctgcttgata	300
atattccaca	ttgntttctg	gaagaattga	acattcttta	cacagcttca	ctaggagcag	360
acaactggaa	atttgccctgn	ggntctctct	tggggagaact	ctgggncttt	tacctggatt	420
taaccnggat	ctcttnactg	naaccaaccn	ttaccnttag	tatngccaag	gataactttt	480
ttgaagtctg	ggagtccttc	cgaaaatnct	taacctgatg	gnnttgggan	ccccgggaan	540
cttgnggcct	ttaaaattan	ncntnttgna	nggttggggg	gnnttaaggg	ggtttaattn	600
gagtncttaa	aactaagngg	ggggggnntt	ttttggn			637

<210> 53  
 <211> 632  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(632)  
 <223> n = A,T,C or G

```

<400> 53
ggtacatcca agatttgaag aactgaaata aatcagcttt aaacctgctt tttaaaaata      60
tctgggttgg aattttgccc tgacaaataa taaaatgatg agtgatgcaa gtgacatgtt      120
ggctgcagcg ttggagcaga tggatgggtat catagcaggt tctaaggctc tgggaatttc      180
caatgggatt tttgattgcc aatctccccc ctctccattc atgggaagtt tgcgagctct      240
gcaccttgtg gaagacctgc gtggattgtt agagatgatg gaaacagatg agaaagaagg      300
cttgagatgc cagatcccag attcaacagc agaaacgctt gttgaatggc ttcagagtca      360
aatgacaaat gggacaccta ccagggaacc ggagatgtgt atcaagaaag gctggcacgt      420
ttagaaaatg ataaagaatc cctcgggtctt canggttaagt gtgntaacag accagtggan      480
gctnangggag agaaaatcna gaattggagt ttggcttgaa aaccncgaga gaattgaatg      540
ccccgaagaa tgctgcacag gagctntaat tggacttctt aaactcnaan ttggactgan      600
gctgaaantt acctgagttg actgnnttgg tn                                     632

```

<210> 54  
 <211> 661  
 <212> DNA  
 <213> Homo sapiens

```

<400> 54
acaatagaac tttcagaaaa ttctttactt ccagcttctt ctatgttgac tggcacacaa      60
agtaaggctg ttgctttcaa tgcattgcaat attaaacttt agtgtttact aactctgtgt      120
tttgcttacc tggcttttct tccttgaagt tgcttaattt tttttcctcc aagaggaatt      180
atttaaaaag acttttgtct gtgacataac caagatttat tctgtttacc taagggaactt      240
attttctttt ttgcaatttc atttattctg agtcacttta tttgtaataa gtgaagaatt      300
ttaataactta gaaataagtt gtaaagaaaa taatgagaat cttaccatgc tttagaggaa      360
cggtaatttc tagaaatagt taaaagatga aataactaaga tattatttta ccttctttat      420
atagctgtat atactggtag tatgaaagca actagtgtca ttgatgattt tttggggggg      480
tatttttgta ttctaggctt gctgcaacct catttagaga gggttgccat cgatgctcta      540
caggttatgg tggttggtag ttccccacc aaatcgtaga aagcttcaac ttttaatgcg      600
tatgatttcc cgaatgagtc aaaatgttga tatgcccata cttcatgatg caatgggtac      660
c                                                                                   661

```

<210> 55  
 <211> 628  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(628)  
 <223> n = A,T,C or G

```

<400> 55
acaactgcct acattctttc tgtttatcac ttcagttaga agtgttacat tcccaaactc      60
taatgttaat ccgagaacgg tggggagacc ttgtgcaggt ggaaagggtat catgctggaa      120
agtgcctctc cctttcagtt tggaaatcaac aggttcttgg gagaaaaact ggaacagcat      180
ctgttcacaa agttacaatt aaaattgatg agaatgatgt ctccaagcct ttacagattt      240
ttcacgatac tcctttgcca gcttctgatt ccaaattagt agaaagagcc atgaagatcg      300
accacttata aatagaaaaa ctcttgattg acagtgccat gcaagagctc atcagaagct      360
tcaagaactg aaggccattc ttagaggctt caatgccnat gaaaactctt tcatagagac      420
tggtccagc tcttggtggt nccatcttgg agccctgngg naattcanan tggctgccat      480
tttgnagaat tacattcttg gaagntcaa tggagcttta tngacttgnc aggccctntg      540
ggtgaatggg aanctnggat gagatttgaa ccaatntacc cggattanca ctttaagtttg      600
nttggcaaaa ngttcaggcg nntnaaaa                                628

```

```

<210> 56
<211> 635
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(635)
<223> n = A,T,C or G

```

```

<400> 56
acctcagctg gggaaccgtc ctagaaagag atggccacta tgctgtagct gccaaatgct      60
atntaggggc cacttggtgct tatgatgcag ccaaagtttt ggccaaaaag ggggatgcgg      120
catcacttag aacggctgca gagttggctg ccacgtagag agaggatgag ttgtctgctt      180
ccctggctct cagatgtgcc caagagctgc ttctggccaa caactgggtg ggagcccagg      240
aagccctgca gctgcatgaa agtctacagg gtcagagatt ggtgttttgc cttctggagc      300
tactgtccag gcatctggag gaaaagcagc ttctcagagg caaaagctcc tcctcttacc      360
acacttgga aacgggcacc gaagggtcnt tcgtggaaaag ggtgactgca atgtggaaag      420
aacatcttca gcccttgaca cccctgaccg tattanggaa nccttnanaa acttgagaac      480
attnagtacc ttgggcccga acacccttan ggcgaattcc acncactggg ggccgtacta      540
nggggntcca acttgggccc ancttggggg aanatnggcn aacnggttcc ttgggaaatg      600
ttacccttcc aatcccncaa ntnaaccgg aggnn                                635

```

```

<210> 57
<211> 345
<212> DNA
<213> Homo sapiens

```

```

<400> 57
actgcttgga tctgctctc tccaagctgt gcacacacat aaggcagatg atgaccattt      60
gaaagatgag aaggtccggg aggaaagcat atccactctc atactcctcc tcatcctcac      120
tgccaggct gaggttgggt gaggaggcca ggtagaagag gcagagggtg aagtcctcca      180
ggactgactg gcaaagttag gtcagctctg agtccacgga gctgcttttg ggctgtagga      240
ggctttgcag atacataaag ttcactagca accttttaac gtctttacat cgctttttgc      300
caggagacag tttccgagtc tcacacttct tcagttgggtg gtacc                                345

```

```

<210> 58
<211> 638
<212> DNA
<213> Homo sapiens

```



```

<400> 58
ggtacttcct cttcctcctc atcctcacta gaggtcttct ctgcggcatg attagacctt      60
gggggaggag cagtggcagt gccatctgcc ttctggatcg atggcttctg acagatgtat      120
ttgggggtccc ttccaagatt acagatttct tcaagtaact tgatgatggc agtcgttgca      180
tctgttttaa ggggtgggctg atgtctcatg agctcatcga cagcactccc caggttggat      240
gcagtatccc caaggggatc agaacttctc ctctccgca tggctgggag gtaatctgga      300
gacagaagaa ctttgaagag gcgttcaaaa ggctgacact gaacaaaaga ctgaagacct      360
cgggcattca aacagagtgc actgaatata tttgggaggg agccaaggac ttcacgggta      420
gcaggaacat ctttgataaa gcagtgcacg cagcatgaca tctggcaatc cattgtcctg      480
gagtgaggag agcagtgatg gttcttgaaa tacaacacac gtcaccactt cagtagctag      540
gaggaagagt gatgggccac agtattctgc attgctgatg atgtgtttca gggaggtagg      600
cagagaacca tccatcacat gtcgtatgcc atctgaga                                638

```

```

<210> 59
<211> 728
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(728)
<223> n = A,T,C or G

```

```

<400> 59
gcgtggctcg cgcccgaggt accatgcccc gctaattttt ttacttttag tagtgacggg      60
tctcactgta ttgcctaggc ttctcaaaact tctggactca agcaatatgc ctgcctccgc      120
ctcccaaagt cctgggatta caggcatgag ctaccgagct cagttttgaa aggtagaagt      180
gtatgctaca agggatgtag gacttgagag tcaaggccta tggctctgtc ctggctctac      240
cagtaagtgt gaccttcgat gtttttttct caagtaaggc tggttaataat taccacagtt      300
gtgagaattg agaatttgga aatgcagtga aagagactat actcaagtct tgttctggac      360
taacagtgat cttaaaatct ctcatctcaa agaaataaag tattttgatg atctcttgca      420
tgngngtatt aataaacctt ggnataatgg cagaaactgt acctacaaca gggttaccgt      480
taactctttt tggaaggtgg tttggaaaaa naaggaatgg acccttgaat cttggaagaa      540
cgttcaancc tcatgacnta aggaaaaaant tggaaaaggg ccattggnga ncccaaggac      600
ccaatgccc n tgctcttnaa aagggaagg ggggaccang ggntcaaaat tggaaaaacc      660
gtttttccng gaaatccttt gggccccntt nnaaaggtcc ccaccttngg ggaattttga      720
aaaaaaaaa
                                728

```

```

<210> 60
<211> 581
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(581)
<223> n = A,T,C or G

```

```

<400> 60
ggtactggcc caaggcaaag atggagaata tgaagagctg ctcaattcca gttccatctc      60
ctcttttgct gatgcacagg gtttcagtga tctggagaaa agtccatcac ccactccagt      120
aatgggatct cccagttgtg acccatttaa cacaagtgtt cccgaagagt tccatactac      180

```

catcttgcaa	gtttccatcc	cttcattatt	gccagcaact	gtaaacatgg	aaacttctga	240
aaaatcaaag	ttgactccta	agccagagac	ttcatttgaa	gaaaatgatg	gaaacataat	300
ccttggtgcc	actgttgata	cccaactgtg	tgataaactt	ttacttcaa	gtctgcagaa	360
gtccagcagc	ctgggcaatc	tgaagaaaga	gacgtctgat	ggggaaaagg	aaactattca	420
gaagacttca	gaggacagag	ctccggcaga	aagcaggcca	tttggggacc	cttccttcca	480
ggccccaag	gcaggacacc	tcatggatga	caacccttc	gnactcgaaa	agtcagactt	540
tcttttgccc	cgggcttttt	taaaatccaa	agttacnaga	g		581

&lt;210&gt; 61

&lt;211&gt; 681

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(681)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 61

acgagcccaa	gccttgttcc	atcagccaat	tgcaaacctg	ctccttggtc	cacttggcaa	60
atggcatatc	caagtcactg	ttagactgtc	ccaagtctcg	agaccaacct	aatcggggcc	120
ccgcgggtgc	ccttgtccct	cctcttttga	attcaggctc	agacatgtca	tctgggttga	180
atgtagtgtg	ttgacttctc	ctaagttttc	caaagagttt	catgatacct	ctggatttct	240
ttttggaatc	tggagatgga	ggcgggtatc	ggaagggact	gttcctctgt	gaatcttttg	300
gccgagaaaag	aagcaccagc	cagatctagg	tgcctctgtg	nctctttttc	tgnttcaact	360
aaatttggtg	cacttgctgg	tctcttggtg	cttttgattt	taaaaaagcc	ccngccaaag	420
ggaanactga	cttttcgagt	gccnaaagg	ttgcattccat	ngangtgctc	tgcccttggg	480
gcctgggaag	naaggtccaa	atgggctggt	ttctggccga	ncttttggcc	tttgganncc	540
ttctggaaaa	gttnccnttt	tcccattaaa	cgntntttct	tnaaaatggc	ccagctggtt	600
ggacnttttg	naacttgaag	ttnaaagntt	ttcccccant	tgggnnttaa	cagggggncc	660
cagggatatt	ttnccttant	t				681

&lt;210&gt; 62

&lt;211&gt; 569

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(569)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 62

actgggatta	caggcgtgac	ccaccacacc	cgggccctaa	ccactcttga	aagtcccttc	60
acatctgtta	gttctttaag	gatgaaggct	gagaattaac	cttgttccct	attccccgaa	120
gtgtctgacc	cagtgtctgaa	tgtgtggctg	gagcttggtg	aattctttcc	aaataaagga	180
attcccacaa	cagccccacg	aaggacttga	ggcaaggatt	aggatcccca	cttacagaag	240
aggaggacaa	ggcccagaga	agatccccc	gactcagcca	gggcacgagg	ggtcgggtga	300
gttttgagat	cgatagagcc	ttctttcact	ctcctgtgac	gacatgacag	tagataaaaa	360
gcatatacct	tcatgcactc	tcatgggctc	tggcaccatg	tttagagtcg	ggctaggggt	420
ctttgcaatc	tggtaaccta	tggtttaaac	ttatacccaa	acctctcttc	ctgcttcttg	480
nctgtgcaca	tctctttcca	tcagaccatc	catagctcaa	gctcaacagc	tttnccagct	540
agtnttctn	ctccttttnc	atggagtg				569

<210> 63  
 <211> 650  
 <212> DNA  
 <213> Homo sapiens  
 <220>  
 <221> misc\_feature  
 <222> (1)...(650)  
 <223> n = A,T,C or G

```

<400> 63
gaggtacaat ggaggtatct gtgggaagga aaatgcaggt aaagatgaag aggaaaatct 60
gccttgtaa agcccagctc cccaaagtat tagacacatg aatttgcttc tgtgctgagg 120
ccatctgtgg ccgtcaggct agctgttttc tggctgatac tttttgggaa tgttattggt 180
gctgagaaaag atagtcccat gtcagagcta tcaacagaat gtggccatct ggacaaccat 240
gtataaacca acttattgct tcttgaatgc cacctacaaa catgactacc tgtcctttct 300
tgtttgaagg ggcactaaca atacttggga agatggaaag tgaactggac attaaggcag 360
agatgaagaa ttctgccttg cttcctgcac tccatggaaa aaggaggagg acactanctg 420
ggaaaagctg ttgaaccttg aactatggat ggncatgatg aaaaaggatg tcncngacca 480
naacnngaaa aaaaggtttg gtttaagtta ancctnagggt acccgaatgc aagaacctac 540
cccactttaa catgggccca anccttaaaa gcctnaagnt atgnctttat tcnggattnt 600
nccccgaang naaaagnttt ttgantnaaa attncccncc ccnggccggg 650

```

<210> 64  
 <211> 676  
 <212> DNA  
 <213> Homo sapiens  
 <220>  
 <221> misc\_feature  
 <222> (1)...(676)  
 <223> n = A,T,C or G

```

<400> 64
cgaggtgcca attgggagga accttctttg gatgaggggtg ctcggttttag caatatcaag 60
gtgtggctcc agataattca atcatctaata taagattcca gttatgctaa tctgttttaa 120
aattccgttt gtgtaaattc ttttaciaaag cctcaacccc aatttccagg gaggggtcag 180
agcctcaggt tgagttgatg accaacagcc tatagtttta cccatcatgc ctctagagtg 240
aggtctccaa aaaaatccaa aaggaatagc tgtagagagc ttctggataa cactaactgg 300
aaggtagagc gccactccaa acaagacggg accaaaaaatt tttctgaatt tttcgcaata 360
tctgcaacaa taaaatggga aatgtaatgg ccctcctacg tgttgggagc tctttcagcc 420
aatggatgcn actattacna ggantgggtg aaacctggat tataaccagc tgctgaaaaa 480
gccagtaaac aacgtaaggc ttccattggg aatantattg gaaggacagt cntgtgggac 540
ttcgccctt tgnaactaat ggtatgcccc gnanataaacc gtncccttgg atttcaagac 600
cccctttggt tggnaaatt tttgggcatt tgcttgctgg ctttaattacc attggaatca 660
aatcttttcc ggccnn 676

```

<210> 65  
 <211> 660  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (660)  
 <223> n = A,T,C or G

<400> 65  
 acgtggcctg aagagatggt attcttttaa atggctctcg ctgtgggcca ggtgccccca 60  
 tacaacaact ctcggtgat catggcagtt accgtggcct tggcaggatt cggagctgcc 120  
 ctggtataaat ctttgggtgt atgtccttga ctaactccta cagcctgggc gacctcgggc 180  
 accatgggaa gaattccagc aggcagctgc tgatgactta gataaggcat cctgaactca 240  
 tctcttttat tactagtccc attttcatcc ccagagccag gttcaaaaaa ggttactttt 300  
 cttccatccc ctgggtttct tatgggtgtc ttctcctctg acttgagtgc cggtttggtg 360  
 gctgcgcctg cgggactttg aaaccaggga tcttcaacat gntctcgctg cattgccttg 420  
 gccaccttct tgtgggtgcc gtcttnttgc aatgggggtt ctaaccttna cctgnatnac 480  
 aaacttcctt ncgcnccgga aggcctngctt cntgaagaac gtgtaccttg ggcgngaaca 540  
 cgcttanggc gaantccacn cactggnggg ccgtactann ggaatccaac ttcggacca 600  
 cntggggnaa catggcaaac tggttcctng ggnaaatgta tccgttacia tteccncana 660

<210> 66  
 <211> 678  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (678)  
 <223> n = A,T,C or G

<400> 66  
 actcaaatct catcagcagc gtctacatcg taaaaaacia ttagagaatg aaatgatgag 60  
 gggtggatta tctcaagatg cccaggatca aatgagaaaag atgctttgcc aaaaagaatc 120  
 taattacatc cgtcttaaaa gggctaaaat ggacaagtct atgtttgtga agataaagac 180  
 actaggaata ggagcatttg gtgaagtctg tctagcaaga aaagtagata ctaaggcttt 240  
 gtatgcaaca aaaactcttc gaaagaaaaga tgttcttctt cgaaatcaag tcgctcatgt 300  
 taaggctgag agagatatcc tggctgaagc tgacaatgaa tgggtagttc gtctatatta 360  
 ttcattccaa gataagggcc atttatcctt gtaatggcta cattcctngg ggtgatatga 420  
 agagcccatt aattanaatg ggcattcttt ccagaaaagg tngcaccaat ctaccttagc 480  
 cagaacttac ctgngccngt tgaaagtggg ccttaaaatg ggggtttaatt cttagagatt 540  
 tttaacctgg ataatatatt antggaccgn gaagggcctt attaaaatgg cttgctttgg 600  
 ccttngactg cttnanatgg cccccaatc taagtncctg ggccggaacc ccttangggc 660  
 naattcagcn cactgggg 678

<210> 67  
 <211> 695  
 <212> DNA  
 <213> Homo sapiens

<400> 67  
 ggtactatgt gtgaagaaat ggagaaaagg aaaaatcagt gtagaaaaat aaaaaagca 60  
 agagtggagt tgggtgcctac agttcacagc atgtgataag gactgagcat ttattctatt 120  
 atttggatcat aaaaatgcag gctgttaggg cctacacaca ccagcttatc gcagacttgg 180  
 ctctgagctt tcttgcagcc aatacaaaaca gggagacaca acagagaatt gccaatgctg 240  
 gaagctagat gtctaattgt gatcctgctt gtgactaaa gctgaatctg ggctaagtca 300

cacatgtcct	gacactctgg	aagctctgtc	tgggtgggtct	gggaacgggg	gagaagtgaa	360
agaggaagta	gcaaggaaag	atgcagaggc	ggagcctggg	agctaggga	gtgccagggtg	420
ggactgacat	ggcaccagga	gtccctcctg	cagggatctg	tcctgattca	ggtcagctgc	480
atcctgcatc	tctagggaat	gagaccacat	ctgcaactca	ccaggactgt	tcactgtttt	540
ttccaccccc	caatctcact	cccactcaat	cccttggatg	tgggaaggag	aaatacttaa	600
gctgaatgtt	gctgtggccc	atttgatgac	aggttaccag	tgtgggggat	gacccccaat	660
gactgcaaga	agtgggtccag	atgtcagaag	tgggt			695

<210> 68  
 <211> 579  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(579)  
 <223> n = A,T,C or G

<400> 68						
ggtaccaagg	aagacattca	gagtgtgatg	actgagatcc	gcaggtccct	tggagaggta	60
tgttttactt	tagtaaatgt	tagtttatat	ggtaattttt	cctttaggaa	aatctgactt	120
ttttagtgta	tttgcttaca	ttatttacac	ttctgagtta	gattttgttt	gaacaaaatg	180
ttctgtgttt	attaaaaaaa	aaaaaaaaaa	aagaagcagt	agcttgtaaa	attctgcttt	240
agcctgtatt	ctgaagggaag	aatgccttag	agtaagtctg	acttcagaat	atztatgcag	300
taaaactgac	agtattcttc	atcctaacaa	ccttatggta	gaatagaaag	aacagtggac	360
taattatcag	gagacctgac	aattagtctt	agtcattgtt	gtgtcgacag	ttagctggag	420
gaccttgaat	ataagttcct	caacctaaat	tgacatcagt	gnttttcacc	tataaaataa	480
attaaaatag	gtaatgatta	aatactctta	aggctcttat	attangnaat	ggactgggat	540
tgagtaataa	atacctaata	gcccttcagt	taattnaaa			579

<210> 69  
 <211> 661  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(661)  
 <223> n = A,T,C or G

<400> 69						
cgaggtacaa	gctttttttt	tttttttttt	tttttttcag	aatgctaaat	tctatttttg	60
tagagcagag	actccattaa	aaactcccaa	atgacaaact	agaaaaaaaa	tttacaacac	120
tgtgtgaaaa	tcanagtgtg	attttcctta	atatacaaag	agctcttgca	aaccaacaag	180
aaaaacacaa	atacccaa	ggaaaaatca	acaaaggaca	ggaatagtta	gttttcagaa	240
aaagaaatat	gaattaccaa	taagtgtgaa	aatgggtgctc	aatgccatca	tgattaaaga	300
aatgtaacca	aaacagtggg	gagcccattt	ttcatgtggc	agattactca	attttagtaa	360
tttattctga	aaacaatctc	ccacaagtgt	atacttcac	ttgnatgcnc	aaggaagtac	420
aagctttttt	ttttttttnt	tttttttttt	ccttggctgn	agtcatgagc	cttttgaaaa	480
aggcctccaa	agtaaatntt	tcagggggaa	tagggaaagt	ntttttttta	anaaggcngt	540
gattntaant	tccccgggac	tatggtgaaa	tactntgaaa	aaattnaant	gggccatggg	600
ggccnaaatg	gngctnttta	aaangngggg	gaaaaaantt	tttgngggaa	aatncccaag	660
						661

<210> 70  
 <211> 697  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(697)  
 <223> n = A,T,C or G

```

<400> 70
actgagtttc cagaaagcgc agtgcacttt tagtgcgcca aactggtaat ttgccattta      60
gagaatttct cctaaagtag attattttctg ttaaagcaaa tcactattcc taactgattt      120
ataatttttg taaatctaaa ttttcatgaa ataggcttat aaagcgtgcc acatttctgt      180
tttctcctat ggacaggaag aaaaagttgg atggggacag aaggacagaa caggggtgcgg      240
aaaccatagg ataaaagctg tgggttttcc cccaaaagtt gctcaaaaga ataatatgac      300
ttctgctttt cttctcctct gggtggcaat tggggaaatcc agcagcctgt tgagaggaca      360
gaattgggta agttgtggag aggtgcagtc taattggtaa atctttaaaa gtcttggttg      420
tctaacctgc tggtttttct gctcacagcc cctgcagata tcttctcacc taccttaacg      480
ctggcatgca agntttttct ctttgctgag tggcatttng gtttaatttcc atgttnaatt      540
ctaaccttgg ccatgattac naagccccta ctatgggctt gctttgagtt angccctggg      600
gctttaagna atnccctanaa ttcncccntt cttnattctt aagggtcttg anatnccaaa      660
atgatnganc ttgacnttgg tttgggaggg naactna                                697

```

<210> 71  
 <211> 705  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(705)  
 <223> n = A,T,C or G

```

<400> 71
accacacagt caatgatgtc agccactccg agctttaggg tcctgggagt ggagtagagt      60
gatagctctg tctctccaaa aagcaaaaagg atcctgcttg gggacacccc aaggtgggtg      120
gccatgtggt ccaccacact ctgcaggggc tccgacatcc tgaggggcaa tctgaccagg      180
tcagcccggc aacggatttt gagtgggaag aggccttcta gatgacgggt gatgaagccc      240
aatcttccag gtggagagga cagcatgacc aaaggaagga cgtggagggt acatggcatg      300
tgcagggaaac tacactgaac actgcagaga gccactggca ggaccagga cagggagcac      360
ctacttggtc atactgggga gcttggcctt tctcttggtg gtctggagat cccaaaagaa      420
tttatgccaa aaagttagag gtggatagat tttaaatact ggggttttta aatacccgan      480
ggattttaaa tactcttgat gggttaatct aaatttangg ggaacaaaaa ctggaggcnn      540
ntnaaaaggn cccttataag tggaaaaaant gaaaagagnt tgnattangg cnnccnaaat      600
ttntgggtgc nttttaagtn ccnttngatt tcccannaaa attnaatcng ggggatttta      660
atcccgaat  tgggggaana aannnnngaa gggtnccaa  ttttg                                705

```

<210> 72  
 <211> 683  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(683)  
 <223> n = A,T,C or G

<400> 72  
 actgaatgaa gtaaccgaag acaacttaat agacctgggg ccagggtctc cagcccgtgg 60  
 tgagcccaat ggtgggggaa acagcgcccc catcttccct ctctctccag cttgcaggct 120  
 tagacttggg gacagagagc gtcagtggca ccctcagttc actccagcaa tgtaatcccc 180  
 gtgacggctt tgacatgttt gccagacga gaggaaactc cttggctgag cagcgcaaga 240  
 cggtaacctg tgaggatcct caggctgtcg gaggacttgc ttctgcaact gacaatcgaa 300  
 aacagagttc agaaggggta ggtctttaac cctgtttttc tgcctggagt cttctggagg 360  
 gaaagtcagg tggtttggca aaactggctg ggtaattcag cagaaactgg cttgcacagg 420  
 gggcanggac accctggggg gaaaaaccna cggggggacac cccgtggaac ccaagtantg 480  
 ccttatttga gtcttnacct naccctgtga gataaggccc ccatgagctt tccaatccac 540  
 ccaagagaaa cnagtnacgc nggtgggana cagcttgnac nccanaagc nnacngaagc 600  
 cgggttccaa tctnngataa gggcntttcc aaancctggg ggtcttacca aagggcccaa 660  
 ttttcaggcc aanttttntg gnn 683

<210> 73  
 <211> 566  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(566)  
 <223> n = A,T,C or G

<400> 73  
 acagtgtgga aatttcaaca tgtatatata tccgtgaaac cattatccca atcaacatca 60  
 tgaatttaac catcacccca aaaagtcttc tcatgatctt ttgtaatacc ttcctctttc 120  
 ctgtcccgtc cccacaacc gtctgttttt tgttctatta gtttgcatth tctagagttt 180  
 tatataaatg aaatcaatac attatacctt ttttgtctag cttctttcac tcagcataat 240  
 taatgtgaga gctgtccatg ttgtctaata tattagtagt ccatttctat ttttgtgggg 300  
 ttgggcaggg gctgggtagt attccattaa gaggatacac tacagtthgt ttattcattt 360  
 tcctattcat ggatgttttg gttgtttctg gtttgaggcc tataatgtca cttgaagata 420  
 gattgtgatg ttaaagggtc atactgtaaa ccctaaaata gtcactaaaa taacnaaaac 480  
 gaaaagggtat tggtataaag ccaacaaagg aaataaatca aatcataaaa tacnaaagaa 540  
 agcngaaaaa gaccaagggc acctgg 566

<210> 74  
 <211> 690  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(690)  
 <223> n = A,T,C or G

<400> 74

cgaggtgtac	aagctttttt	tttttttttt	tttttttttt	ggctccctgt	agcctcgact	60
tcccagcaat	cctcctgctt	cgccctcacag	caggcacacg	ccaccatgcc	cagctaattt	120
ttgtattttt	tgtagagaca	gggttttgcc	atgttgccct	ggctgggtctc	aaactcctgg	180
gctcaagcaa	cccatctgcc	ttggccaacc	aaagtgtctg	gattctaggt	gtgaaccact	240
gtgccagcc	aatctctgtc	ttttaaatga	gggtgtctgc	atcgtttgtt	tcacatggnt	300
atttaggact	aactctatca	ttctgtctgt	cagtaatttt	gtttgccagg	ctgcctttgg	360
tctttttctg	ctttcttttg	nattttatga	tttgatttta	tttcctttgn	tggcttatta	420
acaataactt	ttcgttttgg	taatttaagn	gactatttta	gggtttacag	tatgcacnt	480
taacatcaca	atctatcttc	aagtgtacatt	atangnctna	aaccngaaac	cacccaaaca	540
tcntgaatng	gaaaatgaat	aaccaactnn	annggaan	cttaaaggaa	actaccaacc	600
ctggccaanc	cccaaatng	aaaggcctct	aatccnttna	cacntgggcc	ggtttncata	660
atntcntggn	gaaaaacttt	cccaaaaggn				690

&lt;210&gt; 75

&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 75

ggtacaaact	gtgttattca	catctggccc	ccaaggtata	taagggaaaa	ctttaaataa	60
atctttaagc	tcatcagggt	acaaagcaca	gtctctatcc	aaatcatgct	tgtcaaagggt	120
gctttggaga	aataaatatg	catgatgatt	taattcagta	gtgcaatcag	gagggtatttt	180
cagcaggggg	aacaaatatt	caggtgtcaa	atccagggtca	tcatcataac	caaatcgctg	240
aagcacagtc	caagtagttt	cgtgtctccc	tctctggata	aaaagtgtgt	gtaaaaagag	300
aaaacctttc	agggtcaacc	cactgtcagc	cacaccatca	cttatatgtt	ttctgactac	360
attcttgaca	tcctccagag	cttgaggagc	taatggagtg	ttgaaacaaa	tcctctgaaa	420
gaagttgagt	tcagcatcat	tgagagt				447

&lt;210&gt; 76

&lt;211&gt; 674

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1)...(674)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 76

actgttaggt	aattttgata	ttttacttag	ttggtttctt	ttgttttttg	agacaggggtc	60
ttgctctgta	gccagggctg	gactgcactg	gaactcctgg	gctcaagcaa	tcctcctgcc	120
tcggcctcca	agtagctggg	actactacag	gcactcacca	ccattcctgg	ctaattttta	180
gttttagttt	gtagaaagta	agactaaata	cactggatca	ttcagaatgt	cagaaagttaa	240
tgttttcctc	agtttatttt	ttcttaatat	cacacaccat	gttatttggt	tgtgttttgt	300
tagtgcttgt	aactagagtg	caacttaatt	aacaatttgc	tcctcctcat	gaggttcatg	360
gcagtataga	cttaaattct	agtcccatgt	ttgncattta	ttagctgtgt	gctaagactt	420
ggttttccta	tcagcagaat	tgctatgtat	atctaagggt	atgttaaggg	ttcaaaccag	480
gaacctctct	tgtaagtga	aggtgggggg	gagctatttg	taaatttttt	ggtcagaaat	540
tggcatacct	aatttaatta	ctaccttact	aaangnatca	attaccctca	tctatttcan	600
nggtttaatg	ggnccaagt	gaatattcct	ttacttaaaa	gccagtttta	ctgggaaatc	660
ncttancaag	gntt					674

&lt;210&gt; 77



<211> 441  
 <212> DNA  
 <213> Homo sapiens

<400> 77  
 acatgggtctt ttgttcoccta aaagactgca tcacacctct gattgggagg ccaactgtca 60  
 ttttaactgag tgtttgagtg tctaaaacca agttcagcat ttgtctatct agcaagcttc 120  
 cttttccaac ttgtttactc ctctcaattt catctgcaga tctcctgggt caataaggct 180  
 caaaaactgg ctgttccctt gcattccctc ctcttctccc aggcactctt catccttttt 240  
 tctctcaggc tcacccttac aatccaacac cttccaatgg cctctcctag tccagtccat 300  
 cctgacacca agtaactggc ccgctttgga agtcctgaca ctttcagtcc ctctttcctg 360  
 ttctttccac tttctcggc ccccaggagg atcctggatg gtcgtcacag ctgacaaatg 420  
 atgagcagaa tgccctgtac c 441

<210> 78  
 <211> 623  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(623)  
 <223> n = A,T,C or G

<400> 78  
 ° ggtacacgat taacttaaca caaaaaccg aacttcaaaa tgaagggtgtg tggaggaaag 60  
 gtgctgctgg gtctccctac aactgttcat ttctttgtgg ggcaggggggt agttcctgaa 120  
 tggctgtgggt ccaatgacta atgtaaaaca aaaacagaaa caaaaaaac aagggaactgt 180  
 catttccacg aaagcacagc ggcagtgatt ctagcaggcc tcaggggccct gggcctggag 240  
 aggctacatg aggggggagcc tcagtccacag gatcaacctg gggcccgaag gagcaggggt 300  
 ccctgcctct ccctctgcaa cagatcatcc catccaacac aacccccaaa atgttgatga 360  
 tgacgcacat ggtcaaccct caagacctt aagacaaaac agagcacata ggaaaaaaa 420  
 aacnaaacgc ccaatttctg ctgtgtcaat ggtagggcac cattttaaaa agtctgctaa 480  
 acagtctgct ttacttggan ggacgtatgc aaacataatn cttgttagtg aagaaccatg 540  
 acgcctctac ttactctaag ttagtngaca ntaaacttct gctcccttca agttaaagnc 600  
 nttcnaactg ggtggggaat act 623

<210> 79  
 <211> 462  
 <212> DNA  
 <213> Homo sapiens

<400> 79  
 accagttaaa aatgtatttta ccaataagtg ataacagcaa caatagctaa ctgacaattg 60  
 attaaagaca gtatacaggg atccttttgt ggttcataag catgatgatt agattttcat 120  
 gctattgggt gagatatgcc ttctcagac tttgttacag cataggcaca ttacaacctg 180  
 tctgatagga gaaagaaagt aaagatggta tacaggccag gtgcgggtggc tcacgcctgt 240  
 aatcccagca ctgtgggagg ctgaggtggg tggattgctt taggcctgga gttcaagacc 300  
 agcctggccc acatggcaaa accccatctc tactaaaata caaaaaatg gttgtgggtg 360  
 cacacacctg tatttcccgt tgcttgggag gctaaggcac aagaatctct tgaaccagga 420  
 ggtggaggtt gcagtggacc aatacgcac cactgtacct cg 462

<210> 80

<211> 640  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(640)  
 <223> n = A,T,C or G

<400> 80  
 acccgttgct gctgccatgt gtgtgcttaa aacagggttc ctttttgtag catcagaatt 60  
 tggaaacccat tacttatatc aaattgcaca tcttggagat gatgatgaag aacctgagtt 120  
 ttcacagccc atgcctcttg aagaaggaga cacattcttt tttcagccaa gaccacttaa 180  
 aaaccttggt ctggttgatg agttggacag cctctctccc attctgtttt gccagatagc 240  
 tgatctggcc aatgaagata ctccacagtt gtatgtggcc tgtggtaggg gaccccgatc 300  
 atctctgaga gtcctaagac atggacttga ggtgtcagaa aatggctggg tctgagctac 360  
 ctggtaaccc caacgctgtc tggacagtgc gtnacacatt gaaaaatgaa tttgatgcct 420  
 acatcattgn gtctttcgtg aatgccacct aatgggtggc cattggagaa actgtnaaaa 480  
 aagtgactga ctctggggtn ctngggancca ccngaactt ngcctgntnc ttattaggag 540  
 atgatnctng gngcaaggct ttccaannngn attnggacaa tccaacctac caganaagtc 600  
 atggntggaa naaccctgga aagaacaat ggtgaagggg 640

<210> 81  
 <211> 643  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(643)  
 <223> n = A,T,C or G

<400> 81  
 actgccattc cttaaattca tttagattac agtgtgtaat cataactttt gatccatcag 60  
 ctccctttgt caaacactgg tcatactgca tgagttgatt tgcttcattg attctgaaaa 120  
 gctgattccc tcccatcctg tggcaggggtc ctagtccaac aaagcctcca tttgtttttc 180  
 ccatgctatc aatgcagtaa gcagtttcga agcctctgat ttctccccag tcaacatttt 240  
 tgggtggcaa agggtagtgt gaggtgatat cataagctat ttcttccatg aacctactaa 300  
 aactttttgca gttgtgatct tctcgaaatt ttttcaagct ccgatatatc cccatatggg 360  
 aatgcctgag attcaggacg actagcatag aagtagtctt tatattcatc caccaaacct 420  
 tcacaactct aacataattc ttcagagttg gagaagaccc aacataaatg ggcnaggat 480  
 tncctggcag ccccaagac ggtagatatg tccacacgag aaccanggac caaataataa 540  
 tttgncacca cacttggcat atcttgatg agatctcaaa gtttcaccac cccaaatttg 600  
 gaaacctgga tcttgagacc caattcaaag aaaacttttg ttn 643

<210> 82  
 <211> 642  
 <212> DNA  
 <213> Homo sapiens

<400> 82  
 accaagtcac tatttctgac agcattgtgt attagaagga aactggatt tagtcaaaag 60  
 ataggagttt gaatcccgat gccacctctt accaactggg taaccttgga taggaattgc 120

ataactttctc	tgagcctggt	ctcaaattgc	ctacctcata	aggttgctgt	gaagaataaa	180
tgcattgatgg	tttctgaagc	acttatcccc	tgccgttaga	tctcctgagc	tgcatattctg	240
tttaacacgg	gccccagtt	tgtagccaa	gcagctcaaa	tatatgaagt	ctaaaatgaa	300
agtaattgacc	ctttatgate	tctttctatt	gttctcaatc	agttcctttt	tttttagtta	360
cctaattctg	ctcacggtgt	gtccctgttg	ttcagattcc	agatgtcagt	gattgtggac	420
tcctcctttt	tcttaacaga	ttacataata	cctgcagctg	ccaagtcttt	gtctgtgttt	480
tcattatttc	atcattttaca	tcagatcttt	cttttctctt	cccgttgaca	caccctagtt	540
caggcctcat	tcaagtcata	cccagagtat	tgtatcagcc	tcctaattga	tctttactcc	600
ttcactttgc	aacctattct	gtatgccttg	tgaagtacct	cg		642

<210> 83  
 <211> 584  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1) ... (584)  
 <223> n = A,T,C or G

<400> 83						
ggtacagtag	agtctgagaa	ctgggtcaac	actgaagcat	tcacaccttc	aggatatgaa	60
gcagagcttc	ctgtcacatc	tgtagatgtt	gtgctgttgg	tcaagagcca	gtgtgcagtg	120
atctctccac	ctctcatggg	tgcgactgac	ctagacacag	tctcagtcgt	agacatggga	180
cttccatttt	gcacctcaga	gctgctggca	agctgatgtt	ctccaaagg	tggggaatca	240
ttttgccaac	gcaaagacgt	aagtcctaat	tcctttctctg	tggatgggtc	aatgaattcc	300
tcacccccctg	gattcccagt	tactctactg	nttcttctctg	attccactgc	agaggggtgaa	360
agaaggactg	aggatgaagt	ccgtagcaat	tctggagtcc	ttggggaagc	cttctgtctt	420
gctcacaggt	tccagactga	cccgtcaaag	atccgcagcg	ttctcggggc	accttcagtg	480
aacacggggg	caacatgcat	tggctttgtt	gactgactna	ggagcttttg	aggcccagtn	540
gganttggtta	agcttctctg	nacctgcccc	ggcgggccnc	ccgg		584

<210> 84  
 <211> 558  
 <212> DNA  
 <213> Homo sapiens

<400> 84						
ggtaaagaaa	gaaaaaaaaa	aaaggcctgg	atactgcttt	tgctgtctct	gttatgagat	60
ggaagactta	catggtttgt	gataaaagg	gacctgaga	atgaattggc	ttggcttact	120
ttccccctga	aatcctctct	cctgcagact	gtcttgaaga	cctggtgact	ggtaaataaa	180
gccctgcatg	gaggctgcac	agcaggggca	agaggcccat	ccccagcat	ctcactgagg	240
acagcttcag	gctgccttcc	tccgaacgtg	gtccacacct	tcctctcctc	cacagagagg	300
gtgccgccag	aatccccctg	cgctttctgt	gtctgcaatg	gggggcagca	cagggatcaa	360
agccatctaa	agagtttcca	gagaaagtat	taattcagaa	caagccaaag	accctgagcc	420
tcaccacaaa	caggcctttt	ggagtgtgaa	tttgagttga	agatacaaga	tgggagaatg	480
attttctggg	cttaactaat	cctcgtcttc	atgtttgatc	tttaagaagt	catcacccat	540
tgatttcagt	tttgctgt					558

<210> 85  
 <211> 499  
 <212> DNA  
 <213> Homo sapiens

```

<400> 85
acaaaaccat cgccatcaaa aaaacgctgt tctgacaaca ctgaagtaga agtttctaac      60
ttggaaaata aacaaccagt tgagtcgaca tctgcaaaat cttgttctcc aagtcctgtg      120
tctcctcagg tgcagccaca agcagcagat accaccagtg attctgttgc tgtcccggca      180
tctactgtgg gcatgaggag agggctgaac tcaagattgg aagcaactgc agcctcctca      240
gttaaaacac gtatgcaaaa acttgcaagag caacggcgcc gttgggataa tgatgatatg      300
acagatgaca ttcttgaaag ctcaactctt tcaccaatgc catcagagga aaaggctgct      360
tcccctccca aacctctgct ttcaaagcc ttggcaactt cagttggcag aaagggccgt      420
ctggcccaat cttgggtgca actatttgc tctgggaaaa tgatgtaaat cactcatttg      480
caaaaacaaa cagtgtacc                                     499

```

```

<210> 86
<211> 146
<212> DNA
<213> Homo sapiens

```

```

<400> 86
acaggatact taaaatggaa taactttttg gttgcaaaac agagacatgg ttctataatg      60
cttcatgtcc ctccaagatt tgagatcaat ttagggatcg tgaaattttt tttttcaaat      120
ttcatacaat catatttccc agtacc                                     146

```

```

<210> 87
<211> 572
<212> DNA
<213> Homo sapiens

```

```

<400> 87
atccctagca ttttaaaatt cagttgttac agggatccca cataatattt tgtcatttat      60
atgaggggtg atgagggctg aaatttcac tttgggtctg gaacagattc atgggcacac      120
attttaaacg tattggctct cagttctgca gattaagaaa ctccaattta ttgattcccc      180
agggtaatga gaaaatgcat tgagtatat ataacatcca ctacattcac aggaaatgct      240
gtcctggatc aaaaactgac ctggctcatt aattatgttg gagaactcat aaaaattcca      300
tgagagaaag gatattcaag ttggctcatg aattctgagt aaaagttaa aagcaaagga      360
gaggatagcc ttacagagat aacaatagga acaaagtcac agacttgtgg aaatggaaga      420
ccgggctaga aattaggaca gttcatattc aagcaagcag ggttggggtt gtgaacaaat      480
accttgaagc tttggatgcc ttggagccct tgacagtttt tgagaatgta tcaaaacaat      540
taaatagtct atttggaggt gagagccctg gt                                     572

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```

<210> 88
<211> 512
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1) ... (512)
<223> n = A,T,C or G

```

```

<400> 88
ggtaccttat ctccagaagc agactgtttg gggacagcgc cagtgcctgt ggagcggcac      60
ttgacatcag cgtctcttcc cacatggagt gaggagcctg gccttgacaa ccctgccttt      120
gaggagagcg ctggagctga caccacacaa cagccactta gtttaccaga aggagaaatc      180

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accacgattg	aaattcatcg	gtccaatcct	tacattcagt	taggaatcag	cattgtgggt	240
ggcaacgaaa	cacctttgat	taacattgtc	atccaggagg	tctatcgga	tggggtcatt	300
gccagagacg	ggagacttct	tgctggagac	cagattcttc	aggtcaacaa	ctacaatate	360
agcaatgtgt	cccataacta	tgcccagagc	gncctttccc	agccctgcaa	cacactgnat	420
cttactgggc	tttcgagaga	agcgcctttt	ggcaaccgca	ngcacacaan	cattctgaaa	480
ggnaactctc	cccnagaaaa	aaattttncn	ng			512

<210> 89  
 <211> 573  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(573)  
 <223> n = A,T,C or G

<400> 89						
actcggctgc	tctcccgct	tctgagtcgc	ctcctcaaca	atctggacct	caagtgcctt	60
aagggcaaca	gcaggggacg	cggcactggc	tttcagcatt	gcaactgcct	cactgtgact	120
taaaattggtc	aaatcaatgc	cgttgatatt	tagcaacaca	tcacctctct	ttattctgcc	180
atctcgtgca	aggcagccat	ggggtggcac	actggtcaca	aagatgggca	gctcaccact	240
cttacttccc	ctgccccag	caacggtcac	gccaaaggat	tcattgtggt	ccttctttac	300
agtaatgtgt	ttttcttggc	atgtaacaca	ctgagtaaga	tccttatgtg	agcttgggtc	360
gctataatac	gggtggtggt	tgtggtgctg	gctgctgctg	ctatgatttc	ctgcttctct	420
aatgggtgta	ccaggctggg	gtttccctgg	tctagcaatt	ggtaaattca	ctctntctcc	480
actggcctga	ataatctggg	cagcaagctc	cggaagttcc	atacttcagg	tcgtgcccac	540
tgatggccac	actcggcatt	gctgcttanc	ctg			573

<210> 90  
 <211> 658  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(658)  
 <223> n = A,T,C or G

<400> 90						
ggtacctttt	aacccaccct	cctccaatca	tgggaggagt	tggtcgggat	ctcagcatgt	60
ctgaagagga	ccagatgatg	agagcaattg	ctatgtctct	gggacaggat	attccaatgg	120
atcaaagggc	agagtcacct	gaggaagttg	cttgccggaa	ggaggaagag	gaacggaaag	180
ctcgggaaaa	gcaggaggag	gaagaggcta	aatgtctaga	gaagtccag	gatgctgacc	240
cgttggaaca	agatgagctc	cacactttca	cagatactat	gttgccaggc	tgcttccacc	300
ttcttgatga	gctgccagac	acagtatacc	cgtgtgtgtg	acctgatcat	gacagcaatc	360
aaacgtaatg	gagcagatta	tcgtgacatg	attctgaagc	cagtagtcaa	tcagggtgtg	420
gaagcttgct	tgatgtattg	gatcaaaagc	ttnttctttc	cctggacaac	cangtggaca	480
caaaaaaccg	tggtcanaaa	tgggttaaag	tcanatnggg	ccccacttgg	ccccaggcc	540
ttccaatttn	ggctanccta	aaaatccttg	gcttttaacc	nctacttttt	tgnagggaat	600
ttgaagctta	cctttgggcc	ttgggtgggg	ttgnaatcna	agnnggatcc	cttttngg	658

<210> 91

<211> 570  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(570)  
 <223> n = A,T,C or G

<400> 91  
 acctctgact acaccttcat gttggggccct gaccaacaga ccctcagggt gtgagttttg 60  
 gcttcgggga gaaaattctt cctgcttgat gtagggcaaa gtagctgatt tggcagattc 120  
 ctggtgccgt ggcagtgcaa gagagataga tcccactgac ggcttggggtg tttcttgagt 180  
 gtaggaagcc tgattatgag aagtcaaata agtgcctggt gttccctgtg agatggagcc 240  
 tcccattata aaagatgggt tttctgaagc cactgtgggt ttggatgacg ggatgagagg 300  
 gggccgggtg cctgggttgg cgagttgtcg gaagcccgaa cgccttcagg gagattagtt 360  
 atcacttgat gtggagcagg ctgaaggact tcccactctc tgtttggact cttggatgtg 420  
 ccacatggac ttgtagaact tctacattcc aaatctatct ggnccttggt ctggcctttg 480  
 ttcctncagg agtgctgact catgcnttgn tttaatnggt cgctggtaga naacatancc 540  
 gttactgggg tccaatggga tgtacatngg 570

<210> 92  
 <211> 603  
 <212> DNA  
 <213> Homo sapiens

<400> 92  
 ggtacacatg tttttattag attcagtcct cacaacgaat ccattcaaag atacaactca 60  
 cagtgggtgaa atgactggcc agagggttagc caggtagcac gtggcagagg cagggatacc 120  
 aagagtcctt tccatcatat cacactgact aagttttcct ggggttctgtc gaaaatatta 180  
 atgggttcatt gggcataatg gtttctagtt cttttctatt atttcatcca aatgaatttt 240  
 cctttctatt tactatgaaa gattttgtta gccttcacat cttgccctac tgcttataaa 300  
 ctaaggaaaag gcaggttcct ccacacagaa cagctctctc ctctatcact ttctatatga 360  
 aactttcaat aagacatatc gtgtttatct caagccccacc atagctgagg aggaatcgct 420  
 tgctttcccc tataattccc agtgcccagc attctcacia ctaggagggt cttgagaatc 480  
 tcctcattta tacaatatga agtaaaaagg aatttaaact tttaaattgt aacttaattc 540  
 aatgctgaat atcaaaataa tcaactgtta aaaatttaaa tgattgtttt gatataattc 600  
 tgt 603

<210> 93  
 <211> 627  
 <212> DNA  
 <213> Homo sapiens

<400> 93  
 ggtacacatg tgtgcccagc attaaaaaaaa gatgacacag atgctgctca caaatgtcgt 60  
 tttgaaagga agaaaatata tataatcata aaacaaacaa caaaaataaga taaaatatgg 120  
 ggaaatgccc aaaccaactc catgccaaagg aaagagcaat tggctaattc cttaattcac 180  
 caatagggtc ctagaagctg gtctttgata aaatttttat tggttttcag taaagggtgga 240  
 aaaacaagga gaattttatt agcttcttta aaaaaaaact aaattttttt caactcaaaa 300  
 agattatccc ttttttaaga ttagcctttc ttatttgaga agccatcaac aaaccctttc 360  
 tctgactgat agtgacatac ataactgggt tgtttatgca attttaatgt catttttttg 420  
 atgtggatag aggcagaaga aaagagaaga catcctgggc ccagattgca acacaaacac 480

agaactgacg	tgacagctgt	gggggatatg	ggacagagat	acaggaagga	ggagcctggc	540
caggggttgc	gagtgacgta	aaatcacagt	ggggagctga	gagagccctc	ttggagagggc	600
tttgaaatgc	aggccggggga	gtctgga				627

<210> 94  
 <211> 331  
 <212> DNA  
 <213> Homo sapiens

<400> 94						
ggtacctatg	ataatcagat	ggagatctgg	ggaggggaga	acgtggaaat	gtccttccgg	60
gtgtggcagt	gtgggggcca	gctggagatc	atcccctgct	ctgtcgtagg	ccatgtgttc	120
cggaccaaga	gccccacac	cttccccaa	ggcactagt	tcattgctcg	caatcaagt	180
cgcttgagc	aggtctggat	ggacagctac	aagaagattt	tctataggag	aaatctgcag	240
gcagcaaaga	tggcccaaga	gaaatccttc	ggtgacattt	cggaacgact	gcagctgagg	300
gaacaactgc	actgtcacia	cttttctg	t			331

<210> 95  
 <211> 752  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(752)  
 <223> n = A,T,C or G

<400> 95						
ggtcctgtcc	cgcccccttc	cccaagcgcg	ggccccggcca	gcggaagccc	ctgcgcccgc	60
gccatgtcaa	agaaaaaagg	actgagtgc	gaagaaaaga	gaactcgcat	gatggaaata	120
ttttctgaaa	caaaagatgt	atttcaatta	aaagacttgg	agaagattgc	tcccaaagag	180
aaaggcatta	ctgctatgtc	agtaaaagaa	gtccttcaaa	gcttagttga	tgatggatat	240
gttgactgtg	agaggatcgg	aacttcta	tattattggg	cttttccaag	taaagctctt	300
catgcaagga	aacataagtt	ggagggttctg	gaatctcagt	tgtctgaggg	aagtcaaaag	360
catgcaagcc	tacagaaaaa	gcatttgaga	aagctnaaaa	ttggcccgat	gtgaaaccgg	420
aaagaacnga	acncaggctt	accaaaaaga	agctttcttc	acnttcgaag	aaccaaaggg	480
gaaccagctt	taanggccna	aagttgnaaa	aatttccaaa	ggactggnga	atccncnaag	540
tttgtgggaa	aaaaattccc	ttanccttan	ttcccccaatt	aaaaatnttt	ggggncccaa	600
aagnaaaaat	ttngggggtt	tgaaanaaaa	tttaaaantg	ggntngaaac	ntttttggga	660
aattccccaa	aanaactttt	gccttcctt	tgnccttaaa	aanttttncca	tgggggggna	720
aaanggattt	nnccttgncc	cnggggnggg	nc			752

<210> 96  
 <211> 405  
 <212> DNA  
 <213> Homo sapiens

<400> 96						
tacaacaaac	accgaaaaca	aagtaaaaaa	tgaaacacaa	ctagagaaaa	tgtttagggc	60
acatgtcagg	agggttaatat	ccctaatact	gaaaaatttc	ttgctagtaa	gccaaacaac	120
ccaataaaac	tctaaatgat	acttcgtgag	ttgataaaat	gatttccaac	ttgagttgtc	180
agacaaaaca	tttgagatag	actaacaata	ttattgttta	tctaaaactc	taattgggca	240
tgttgtattt	ttatttgtgg	aagggtggcaa	cactatttca	gacacttggt	ctcatttggc	300

cctgcagtaa ctcaatgaga tggggaaaaga ggtaatttaa cctctccaac agcagtttcc 360  
 tcattctgtca aatacagtgt gagaattaaa ttggataata taggt 405

<210> 97  
 <211> 499  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(499)  
 <223> n = A,T,C or G

<400> 97  
 acagaaactt ggtgggaaaa ggggactgtg gccagagttg ggaccctgga gcagcatcct 60  
 ctgcagagaa ggattttgtc tggccagagc ctggagaaac ctgaaaaaga accagtcagc 120  
 tagccagggc ctcagagaaa agcagattac acactcaaat tgggtaattt gagcagagct 180  
 taataaaggc agtatttaca aagtgtgggc taagcctccc atgagagtgc agaaccctgg 240  
 ggctagcagt gtggggcgct attcccagcc cccccaatcc attggctgag gccgctggaa 300  
 gccaccgggc caagggagct tgttgatgtg ggtcacacgg gcatgttccc aggtcaagag 360  
 aggagagtgg agagtgaatc tanggagact caagagggaa gaagtgactt ccactacctt 420  
 tcctttctgg ccgttttgc tccanctggc ttctcttttt ccgannccnt agttttgggt 480  
 ttaangnan ntangtnaa 499

<210> 98  
 <211> 688  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(688)  
 <223> n = A,T,C or G

<400> 98  
 naggtacaag ttatcaatcc gagggacaag agggagggac aagaaccagg tctcagctgc 60  
 attcacatcc tggaccctgt catctcaaag ccagttccct ccctgccttc caacttggtt 120  
 tcattcactt tggattgagt tgcgttctca ctgaacagaa acccacaacc caaaacaagg 180  
 gcagcccatg gccgtgatta agctctgcac cagtggcgaa gggatcgagt gggagaccag 240  
 aattcagctc cgctctgtg cggcctcaag ggagttatga acttctgagc cttagacatg 300  
 cttctgagct gccaccaagc tgcctnatgg ggctgcctaa ggattaatgn attaatacaa 360  
 tcccaggcac atnagtcatt aataaaatta agaatacngn gaccactaaa ccactactt 420  
 tngaagtact tcctactaac ta'nttaaac cccaacttga aggttttgga aaaganaatg 480  
 nccacttgga aaccaaacgg gcnnaaangg aaaggtaact tggaggcact ttttcccttt 540  
 tggggcttnc ctanaatccn tttccatttt ctttttgacc tnggnaaatt ncccngggga 600  
 ccccatctac aaagtctcct tgggcccggg ggntttnaag ggctttancc aagggnntan 660  
 ggggcttggg aaaaagnccc ccacttgn 688

<210> 99  
 <211> 657  
 <212> DNA  
 <213> Homo sapiens



<220>  
 <221> misc\_feature  
 <222> (1)...(657)  
 <223> n = A,T,C or G

<400> 99  
 ggtactttttc ttagtatctt aacatcacat gcattttgta gtttatggtc tccagtctcc 60  
 agctgtttttt ggagcacctt ctaactttga gaggggtgagc tctagcctgt aaaatggact 120  
 gtgggtggct cgtggagaag gtgccctggg gtgcttttct gtgtcctctc tggattctcc 180  
 ctgagctgtc cacctctgaa gcctgcttca ccttcagact gccagggcaa gacatgcagc 240  
 ttctgcagaa ctcatggcag ccgtttttcca cttggccgag ctgggtctgt gaagcagaga 300  
 ggaatcagta ataggaaaga aatgtaagtt gnttttttcc cccttagaat acctaccata 360  
 ctggatttca gcttggagtg cgcagcatga agcatttgtg gtcaaaaaag aggncttccct 420  
 ttttcttct nctggtttct tttcttntct cttcccaact tccccaangc ttactggctt 480  
 tcttntnaag ncacgtgtgt aaaatanctt tgaggggaaaa aanggttccg gcttgggana 540  
 tttggatnta cctaaaggnn cagaataacc cttctttgcc tggttcnttt ttggcctaata 600  
 cnaggggaatt tttcgactgg ggnccattaat ggnccctccg cgcccgtaa anggcaa 657

<210> 100  
 <211> 504  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(504)  
 <223> n = A,T,C or G

<400> 100  
 atttcttctt tgcattgcagg aagaaaaattc actcgccgtt tgataatttg ttatggctctt 60  
 atttgacctg ttatccctgc ctcccatggt ctcttttacc tacaacccat cagctgttag 120  
 agtttctctt tccaagactc tccatgtcca tccctctgc attccccctt ttactcccat 180  
 cttctgtaac ccagccctc gggagctgag gaggtggagg cggatataga cacggagagt 240  
 gctggatgca aaggtgttac ttgtggcaaa ggcgccgtgt gtgctgagga tagatggcag 300  
 gtatgagaga gggcaggatg aagcacaggg gtggaggagg gcagagagac ctacaacaaa 360  
 acccactcaa ggggtatgtg agatagactt tttttctg nctttttgtg tgtctgtaat 420  
 ggggggttga aagtgggtg gtctcancag ntaattctct ggagntctct ggacttgagc 480  
 ctngtcnnaa nagccagaa ntnt 504

<210> 101  
 <211> 685  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(685)  
 <223> n = A,T,C or G

<400> 101  
 ggtgcctgtt ttgccactta ggaagctgga aagaatttc gagtcaagtt aacccaaccc 60  
 cctcttcttt tcacatgtaa gcacactggc tcagccagaa ctcaggtctt tcaacctcac 120  
 agttggtgaa gactcttaca tgttgggtcc aagttgctca actctcaggg ctcagcctac 180

aaaagactcg	gcatttcgac	cagctcagtc	cagaggactc	cagagaatga	ctgctgagac	240
caccccactt	tccaaccccc	actacagaca	cacaaaaaga	acagaaaaaa	aagtctatct	300
cacatacccc	ttgagtgggt	tttggtnag	gtctctctgn	tccccttcac	ccctgngctt	360
catectgcct	ctctcatacc	tgccatctat	cctnagcaca	cacngngcct	ttggcacaag	420
tacacctttg	cattcaagca	ctnttcgggn	ctatatncgg	cttcaacttc	ttagcttccg	480
aaggggcttg	ggtacngaaa	aaaggatgaaa	gggggggaatg	ncaangggat	nggcctggga	540
aagttttgga	aaaggaacct	ttaccnctga	agggttgtag	gggnaaaaaa	aacctgggag	600
ggccgggtta	ccnggtcaaa	taggaccttn	ccaantttta	acnggggagg	gaatttnttc	660
cngctgccaa	naaaaannnc	ttccn				685

&lt;210&gt; 102

&lt;211&gt; 498

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(498)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 102

ggtaccatat	acttaaggct	atagtttatt	tcataacttt	ttttctagcc	ttcatatctt	60
gtgttttcag	gttgtcacaa	tattctttta	aaaattaagc	attcttacgg	cttcactcat	120
gtgcaacatt	tataattatt	tgcatttgcc	ccctcaatga	tctcaataga	ataaatcagg	180
ctccactata	ctcatttcac	aaagacacat	tcattacaaa	ggataaagga	ctgaaatatt	240
tgttttgcaa	tctgttgacc	taagtaggaa	taggaagcac	agtttcagt	cttccaagtt	300
tttaaccctt	gactgagacg	ttttggttga	gtattactat	tcttattcta	ccaatgataa	360
agggaaactg	aatgcccaac	catgtgctgg	ctgtttacac	atatgcaaca	ttgactgggt	420
ctcacaacca	ccttgaggaa	taggcattgn	cttcaattta	caaatgagga	aaacaacat	480
tttcaangng	cattttnc					498

&lt;210&gt; 103

&lt;211&gt; 697

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(697)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 103

gnnatctgaa	attcgccctt	cnagcggcgc	cgggcaggac	taaaaatgta	agtttatctt	60
gccatacccc	taacaacatt	ttattttaa	tatattgtga	cttgattaca	aatcttttaa	120
atgacattat	tggcatatct	ttcttaaact	ttgtaagaaa	aagataacat	ttcacatttt	180
agtagcaaaa	tcattgttaa	gagatagtca	attttgtgaa	aatatttgag	tgctaataca	240
tttttccagg	atgatcttct	atcctttaat	atttagatct	tccttttgaa	gcacttacat	300
catcatcaaa	tttttgggtca	ttgntgngn	catctaattt	ctgggttcatt	ttctaattggc	360
ttcgtagtg	aatgaatttt	agttattcct	aacgtcattg	gtagccactc	ttttgaaatt	420
tttttttaaa	ccaggctttc	aattttaatt	tatanggaat	ttgcattggg	atatagatga	480
ccgctcaaaa	ttcccatgng	agactgntga	aatgncctaa	acnattcgcc	tggaacnctgg	540
attaanccgn	ggcctcttaa	ggtaatctng	anggggtggc	ttattgggaa	aatttggatt	600
nnggcccggt	tactntgcca	ggttngactt	nnaagggccc	anaaggacct	nggaaatnaa	660

gatnccctna acccttcctt ggnaaanaaaa naagttt

697

<210> 104  
 <211> 504  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(504)  
 <223> n = A,T,C or G

<400> 104  
 accatcattc agaataactc ttccaatttc tgctttcaga catgctgcag gtcctcatct 60  
 gaactgttgg gttcgttttt tgtttttttt cctgctccaa gaaagtgact tcaaaaataa 120  
 ctgatcagga tagattattt tattttactt tttaacactc cttctcccct tttcccactg 180  
 aaccaaaaag aaatcccatc cctaaaacct gcctttctct tttatgcaaa actgaaaatg 240  
 gcaatacatt attatagcca taatgggtata gatagtgatt gcgtttggct atgtgttgtt 300  
 ttcttttttt ttaaattatg aatatgtgta aaatctgagg taacttgcta accgtgaatg 360  
 gtcataatac tttaaagata tatttataat tatttaataa catttgacc cttgaaacat 420  
 ttcttagtgn attgatatgt tgactttcgg tctctaaaag tgctctttat taaaataaca 480  
 aatttcctta aagggnctaa aanc 504

<210> 105  
 <211> 746  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(746)  
 <223> n = A,T,C or G

<400> 105  
 ggtactaggt gtctcataat tgaacctctt atccacatgt gcggctttta gctgactatg 60  
 tctttgctat gaagcctggc gatttagagt tttgcttaac tatgaaacca cagaacattt 120  
 ttctgtagtt caatgattta cttgtgcttg tctttttaat atgacaagag tcataattac 180  
 cccaaagaaa ttagaaaacc acatcactcc agcatttcat gctgataaag ggctaaagggt 240  
 tgttttttta atccctaatt accgctttag aaggcaaaagc tgtgttagag gcattcaaag 300  
 atctgaaaga actaaacata acatttcctt catacatcac aaaaacaatc tatatctaaa 360  
 atatttggag aagggaagta ttttttaaaa tcacattgng ccctggatga acctggaat 420  
 ggcttancca tatttcaaga atatggntct aggacccact ggaaggaaaa tttgggtaat 480  
 ttaaataaaa ganccctttt ttaggaggan ccgaaagtcc aaccttattc aattcccctt 540  
 angaaaatng tttcaagggg gtcccnaaag ggccatttaa antaattttt taaaatatta 600  
 tcctttaaag ggtttttttg gancccnttn nccggttgnc caaggtttnc ccttcgnaat 660  
 ttttnccctt ttttccttaa antttaaaaa aaannngnaa accccccctt ttgnccaaag 720  
 cccatnccctn tttttttacc ccttng 746

<210> 106  
 <211> 645  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(645)  
 <223> n = A,T,C or G

<400> 106  
 acaagctttt tttttttttt ttttttttga gatggagtct cacattgttg cctgggctgg 60  
 agtgcagtgg cacgatctcg gctcccgggt tcacgtgggt ctctgcctc agcctcccag 120  
 gtagccggga ttacaggtgc ccaccaccat gccagataa ttttttatat ttttagtaga 180  
 gacgggggtt taccatgttg gccagactgg tctcaaactc ctgacctcat gatccgcctg 240  
 cctcaacctn ccaaactgct gggattacag gcgtagacca ccacacccgg ctgagttgtt 300  
 gatttttttag tttgntcagc tttttacttg gtagaatgaa gtgatgactg ncgacctcct 360  
 taagggccag actagaaact gggagtctcc tatttangnc gccttaaaaa ttgnaagctn 420  
 gacattgggt gtgaagcatt ggaacaattc ttaattctgg tacctganan ggggtgaattt 480  
 tggtttcaact ngcngcttat cagtantcaa ttccttgaac ttttaaaacn ttagttaccc 540  
 ttngtaggga cagnnttcaa attttccttg acttagggaa cccttantct ngggacaagt 600  
 tttattctaa ctgactgttg caaacttang gcttcntacc tggcc 645

<210> 107  
 <211> 684  
 <212> DNA  
 <213> Homo sapiens

<400> 107  
 acagccagat ctttaagatga gtctgtgtca aaatgacctg aacgcaagtc tgtattcttg 60  
 cagagtaaca gagtgttcgt ctgtttctgt ctaaaagtca taactataca gatattctggg 120  
 aatgcttgca tgaagctttt actcccgaga gcatactact acttacgggtt ataacttggt 180  
 gatgtctata ttggetttaat tcaaatgaaa agttcactcc aggagcagct ctttgtaatc 240  
 cacaccaccc cccagactgt tctgaataaa cccagaacaa ctcatacacc agcctaagca 300  
 tgggtctattt ttctgggatg ggacagaaca taattgtatt aaaatataaa atcagtttta 360  
 aaagggtctgg aaggacatat cttaaggcca tgatagtaag tacagctggg gtgctgggga 420  
 ggggacctca actagggttg gtggcaaaaa tgggactttt aactttggct ttaacatcct 480  
 ggtcctaaaa agaagactag atttacctat tatatatgca atctaaaatt aattcaaaaa 540  
 gtcacacagc aggaccccc taagattctg ggtggtaagt ccaccaaagg ccaagagcta 600  
 aaacaaaagc cttttccaca tgttctgaga agttggccca aaactgctga atctataggt 660  
 cttagcatgc tctatctatg tacc 684

<210> 108  
 <211> 236  
 <212> DNA  
 <213> Homo sapiens

<400> 108  
 ggtacacgtc gttctcttca agatctcata gacaatcgtg ctccggggtt tgctgtcgaa 60  
 aaaggaatcc ttatcagaca agtcaaatag atgctgcttc tcccgggaga agggatagga 120  
 gagtctcttc atgggtctggg gcctgtgctc agccactttg ggctggatgg gatctgtgat 180  
 tttctggagc acagagttga tttttttcag gaggccacgg gtctcattaa tgtggg 236

<210> 109  
 <211> 497  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(497)  
 <223> n = A,T,C or G

<400> 109  
 acgagaagtg tgggtgctgga atatctttcc ggtgaggcct caagaagttt acagtcacgg 60  
 tggaaggcaa tgaggagcca gcatatcaca tgggtgacagc aacagccaga gcaaaagagg 120  
 gagggagagg tgccactcac acttaaacia ccagatctgg tgtgaactga ctcatcacca 180  
 aggggatggc actaaccat tcatgaggga tctgccccca tcatccagac acctcccacc 240  
 aggcctcatc tccaacactg gggattacat ttcattcatga gatttggagc ggacaaacat 300  
 ccaaaccata tcagtaggat gtctgacatt catcatacga tgtctgagtg aaggagggtt 360  
 taagggttta ttttgtctcc ctggatagta atggaaaatg tatatctgaa agagatgtct 420  
 gaaaaagaaa gtttaagtgg gtggcttgca cacttttggt ttgctagnng gctttttgag 480  
 ctcanattct catttgn 497

<210> 110  
 <211> 722  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(722)  
 <223> n = A,T,C or G

<400> 110  
 ggtacagccg gtcctcttct tccaggaatt ggctactgtc cctctgcaat cccattcatg 60  
 ataaaagcat tcttatacaa cacaaaagat gctgcatcaa tgattctcaa acctccaaga 120  
 catccaaatc aactagcatg cttaagatgc agattcctgt gctcgactca ccaacttcca 180  
 gaattttcca ttccttaggt ctgaggtgaa cctgggaatc tgccttgcta acaaagatg 240  
 ctgacactgt tgatttgggg accccacttg gagaacctgg gctctagatc tctaccctct 300  
 tactgaagtc ttcttccact tctgtcttta actggaatcc aaccgcccac ccctgnagcc 360  
 cttgcaaagt gaattgccct tttcccttac tctgggtttt tctcctctgg ttctagccta 420  
 gattccangg aacatnaact ttgggcntgg cattttcccc tngatntggg atccttttgg 480  
 nccagntttt ccccaaagna agcctnaat tcaaaatctt tccccntng gttcctattn 540  
 acccggaact tcnnggggna aaaaatnccc aaaagccccc ttacnaaatc cctttttccc 600  
 aaacttcaat tgggaaactn gggctttaa aaagncctcn ttnccaaan ccnaaaantg 660  
 ggccctaacc cccccnttn aaactttnt ttttnnaaa attnttttn anaaattncc 720  
 tt 722

<210> 111  
 <211> 614  
 <212> DNA  
 <213> Homo sapiens

<400> 111  
 accagggtc tcaacttcaa atagactatt taattgtttt gatacattct caaaaactgt 60  
 caagggtcc aaggcatcca aagcttcaag gtattgttcc acaaaccaca ccctgtttgc 120  
 ttgaatatga actgtcctaa tttctagccc ggtcttccat tccacaagt ctgtgacttt 180  
 gttcctattg ttatctctgt aggcctatcc tctcctttgc ttttaaaact ttactcagaa 240  
 ttcatgagcc aacttgaata tcactttctc catggaattt ttatgagttc tccaacataa 300  
 ttcaatgacc aggtcagttt ttgatccagg acagcatttc ctgtgaatgt ggtggatgtt 360

atatatcact	caatgcattt	tctcattacc	ctggggaatc	aataaattgg	agtttcttaa	420
tctgcagaac	tgaggaccaa	tagctttaaa	atgtgtgccc	atgaatctgt	tccaagaccc	480
aagatgaaat	ttcagccctc	atccaccctc	atataaatga	caaaatatta	tgtgggatcc	540
ctgtaacaac	tgaattttta	aatgctagga	ttatcccttc	cctagcacta	tgtcattttt	600
aaaggtgtac	ctcg					614

<210> 112  
 <211> 499  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(499)  
 <223> n = A,T,C or G

<400> 112						
acttttctgg	aaattggctt	taagagctca	tcttgcattt	ttaaaatctc	tccaactgga	60
tcaaattttt	tatatactcg	tttgataggt	ttttttaaaa	cacatgactc	ttcaggacta	120
caagcagtat	tagtctgggt	tcctacagaa	gcctgtcctg	aggaagaatt	tggactagct	180
ggtctggaac	ttaagttaga	acccacaaca	gctgtctttc	catcactatt	atttttacat	240
tctgtatcaa	tgattaaaca	ctcctcatct	gtatcactgc	tgcagagAAC	tgtaccttca	300
gtttttgctg	ctttctgatcc	aacagtcttt	tcctttgagt	tgtctagggt	ttctagaaca	360
ttaggtcttt	caccatcagc	atgtaatata	tctatagtca	tatcattttt	attagaagtt	420
tcaatttcct	gagaattttc	aactggaagg	catcagatgt	tttcaaggca	ctatcttgga	480
tcaaangctt	ggcaaaaaa					499

<210> 113  
 <211> 697  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(697)  
 <223> n = A,T,C or G

<400> 113						
gcgtggcgcg	gcccagaggt	cctaacatga	cagatgctcc	tacagccccc	aaagcaggaa	60
ctacaactgt	ggcaccaagt	gcaccagaca	tttctgctaa	ttctagaagt	ttatctcaga	120
ttctgatgga	acaattgcaa	aaggagaaac	agctggctac	tggataggat	ggtggccctg	180
aggaatgcaa	aaataaagat	gatcagggat	ttgaatcatg	tgaaaaggta	tcaaattctg	240
acaagccttt	gatacaagat	agtgacttga	aaacatctga	tgccttacag	ttagaaaatt	300
ctcaggaaat	tgaaacttct	aataaaaaatg	atatgactat	agatatatta	catgctgatg	360
gtgaaagacc	taatgttcta	gaaaacctag	acaactcaaa	gggaaaagac	tgttgatna	420
gaagcagcaa	aaacctggaa	ggtccagttc	tctgcacant	ggatnccan	tgaanggaag	480
tggtttaaat	caattgggtc	ccggaatggt	aaaaaattaa	ttagtggatg	ggaaaagacc	540
agcttggttg	nggggttctn	aacttaaagt	ttcnanacca	nnntangtcc	naattttttc	600
cttnagggaa	agggtttttn	tnggnaaacc	gncttaaaac	gggttngnan	cccctaanaa	660
ntcttgngnt	ttaaaaaaa	cctttttanc	cnggttt			697

<210> 114  
 <211> 497

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(497)  
<223> n = A,T,C or G

```

<400> 114
accacttct gacatctgga ccacttcttg cagtcattgg gggtcatccc ccacactggt      60
aacctgtcat caaatgggcc acagcaacat tcagcttaag tatttctcct tcccacatcc      120
aagggattga gtgggagtga gattgggggg tggaaaaaac agtgaacagt cctgggtgagt      180
tgcagatgtg gtctcattcc ctagagatgc aggatgcagc tgacctgaat caggacagat      240
ccctgcagga gggactcctg gtgccatgtc agtcccacct ggcaactgccc tagctcccag      300
gtccgcctc tgcattcttc cttgctactt cctctttcac ttctcccccg ttcccagacc      360
caccagacag agcttcacga gtgtcaggac atgtgtgact tagcccagat tcagacttta      420
gtcacaagca ggatcaagca tanacatcta acttccagca tgggcaattc tctgggtgggg      480
ctccctgnnt ggantgg                                     497

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<210> 115  
<211> 687  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(687)  
<223> n = A,T,C or G

```

<400> 115
ggtactatgt gtgaagaaat ggagaaaagg aaaaatcang tgtagaaaaa taagaaaaag      60
caagagttag gttggtgcct acagttcaca gcatgtgata aggactgagc atttattcta      120
ttatttggtc ataaaaatgc aggctgtaag ggcctacaca caccagctta tcgnagactt      180
ggctctgagc tttcctgcag ccaatacaaa cagggagaca cancagagaa ttgccatgct      240
gggagctaga tgtctatgct gatcctgctt gtgactaaag tctgaatctg ggctaagtca      300
cacatgtnct gacactctgg aangctctng ctggtgggtc tgggaacggg ggagaagtga      360
aagatgaagt agctagggaa nagatgcaga ggctgnncct tgggaactta ggcaagtgcc      420
aggtggggac tgaccatggg anccaggaat tccttctctg gtangggatt ctggctcctng      480
aattcagggg taagcttgcc attcctgcat ttcttntagg ggganttgan aacccccctt      540
ttggaaactt cancaaggan ttggtctccc nggntttttc ccccccccta aattnaattc      600
ccnttaatn cctttgaatt cnggnaaggg nnaattcttt ancctaantg ttcttggggc      660
nctatttggg ngacagggtt ncnangg                                     687

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<210> 116  
<211> 508  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(508)  
<223> n = A,T,C or C

<400> 116  
 ggtacccatt ttctatttca agtagattaa ccccttatat tctgctaaaa tcatacttgt 60  
 tgcctaacac ccagttaaca aagcaaaaaa aaatcagtta atttataaaa acaaaatgct 120  
 aattcttatt ctatgtgaat gtatttcata gattttaagg ggttaatcac caattagaag 180  
 acatgctgtg tccacactat tttaagatta aacgttaatg ggaatatatt aattcaaatt 240  
 aacatggtca tgtaaaatat ataaccact caaccattta aaaactagtg tgaacactgc 300  
 tcaattctag aagagacaaa gacaaaacaa acaaaacagc cacacaaagg acaataaatg 360  
 ccaggctctg catccaaaat ccctccttta tcaaatggca gatgtgacac tgagcttttg 420  
 aaaaccttgg ncaaaaatcc ttccgatgtc ttggcagcaa cccctggcag gatcaatccc 480  
 ctctgntata aagntttggg ccngccc 508

<210> 117  
 <211> 644  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(644)  
 <223> n = A,T,C or G

<400> 117  
 acaggggtta aggaaggctt tgccggaaga acaattgtaa atcatgagag ttactacttg 60  
 cgcattgtgt ggtagtctct ttaatgcata atggctcctt ttaataccaa aaattaatta 120  
 ataaaggaaa tgattacatt gtccaaataa ctgttaaaca catgacagat ctgttttatg 180  
 atactgtgtt tgacagttaa acattaagta aacatttaat tgactttaag cttgaaatgt 240  
 tcagaatgct ctaacccttg ctacagaatc ttttctgcag caagttaagt attttgtgtg 300  
 ttttttccca cctgtagctt atcaggcccg gtccaaagcc ttctagcaga ggggattgat 360  
 cctgtcaggg gttgctgcca agacatcgga aggatttttg accaaggntt tcaaaagctc 420  
 aatgncacat ctggcatttt gataaaagga gggatttttg atccaaagcn tggcnttatt 480  
 ggcttttttg gtggctgggt aggggtggnt tggctttngc cttttcttaa aaattaacca 540  
 nggttnccac ttantttttt aaaagggtga atggggtaaa atttttccnt ggaccnngta 600  
 aattgnaata aaaattcccc tttaccgtta aacttaaaan angg 644

<210> 118  
 <211> 500  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(500)  
 <223> n = A,T,C or G

<400> 118  
 ggtacaaaacc catgcagcct ggccctcacg tgggtcaagat cttcttttget ggggacacta 60  
 ttcctaagag tcccttcgtt gtgcaggttg ggggaagcctg caatccaaat gcctgccggg 120  
 ccagtggccg aggcctacaa cccaaaggcg tccgtatccg ggagaccaca gatttcaagg 180  
 ttgacaccaa agctgcagga agtggggagc tcggtgtaac catgaagggt cctaagggtc 240  
 tggaggagct ggtgaagcag aaagactttc tggatggggg ctacgcattc gagtattacc 300  
 ccagcacccc ggggagatac agcattgcca tcacatgggg gggacaccac attccaaaga 360  
 gcccctttga agttcaagtt ggccctgaag cgggtatgca gaaagtccgt gcttggggcc 420  
 ctgggctcca tgggtgggatt gtcnggcggt caacngactt cgtggnanaa tccattggct 480



ctgaaatnng gnctctgggg

500

<210> 119  
 <211> 624  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(624)  
 <223> n = A,T,C or G

<400> 119  
 actcaatctt tgcctgagag gggccttcaa tggcaaaccc cagagacccc acttcagagc 60  
 caatggattc taccacgaag tctgctgacc gcccgacaat cccaccatgg agcccagggc 120  
 cccaagcacg gactttctgc ataccgctt cagggccaac ttgaacttca aaggggctct 180  
 ttggaatgtg gtgtccccc catgtgatgg caatgctgta tctccccggg gtgctggggg 240  
 aatactcgaa tgcgtagacc ccattccagaa agtctttctg cttcaccagc tcctccagac 300  
 ccttaggacc cttcatgggt acaccgagct cccacttcc tgcagctttg gtgtcaacct 360  
 tgaaatctgt ggt tccccg ataccgaccg cctttgggtt gtaggcctcg gccactggcc 420  
 cggcagggcat ttggatgcan gctttcccaa cctgcacaac gaanggactt ttangaatag 480  
 tggncaccagc aaagaaaatc ttgaccacnt tgangggcca gctngatggg tttggacctt 540  
 tggccggaac acccttangg ccaantccng canttggggg ccgtacttag ggaccaactt 600  
 ggnnccaact ttgngaata tggg 624

<210> 120  
 <211> 504  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(504)  
 <223> n = A,T,C or G

<400> 120  
 acaggcatgg caccgacatc tgcttggctt ctgctgtagc ctcaggaagc ttatagtcgt 60  
 ggcagaaggc aaagaggagc ggcaagagag gaagcaagag agagagcgag gaggtctcag 120  
 actctcttta ataatcagat ctcttgataa ctcatttcca tggggagggc accattcatg 180  
 agggatccgc tcccatgacc caaacagccc ccaccggggc ccactgtcaa cactgaggat 240  
 cacatttcaa catgaaatgt ggaggggaca gacatccaaa ctatatcacc tccatactgt 300  
 tttccacagc attcccacca acagtgcaca ggggtttcag tgtctccaca tcctcatcac 360  
 acttgttatc ttctgttttt gtttgtttgt ttgtttgttt tttatagtag ccattctcat 420  
 gantgtgaag tattaacagt gtcttttgaa gatcagaaat ttctaatttg atgaaagtcc 480  
 ngnttanacan nttttttcnt tttt 504

<210> 121  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

&lt;222&gt; (1)...(630)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 121

```

ggtactatcc taagtttaac actgcttcac agtaaggaaa gccgatcaaa atttaaggag      60
agattagaat ccagaaatag gcccacacat atatatagtc attgattttt aataaagggt      120
caaaggcaaa acaatgaaga aaggatggtc ttttcaataa atgatgcaga aacaactgga      180
catccacgta tgcaaatataa ctttaatcca tgccttttac tttatccaaa agctaatacca      240
aaatagaaac ctccctttcc tccctcaaaa aagcttctag agaaaacaca ggagaaaatc      300
tttgtaacct tgggttcaca aagatttctc aggtatgaca ccataagtat gatccagaaa      360
agaaaaaaaa tgataaactg gacttcatca aattagaaat ttctggatct tcaaaagaca      420
ctgntaatac ctcacactca tgagaatggc tactataaaa acnaannanc caaccaacca      480
ataacngaag attncagggt gatgangntt ggagacnctg aanccctgng cactgttggt      540
gggaatnntt ntggaaaaca gttggangng aattagntng gngnntngcc cttccanttc      600
atgggnaagg gacctnagnn tgancgnggg

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&lt;210&gt; 122

&lt;211&gt; 431

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(431)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 122

```

actgaaaagc ttgggtcataa tcttcctgaa catggaatga tctagctagc tgatagcagc      60
tctctgcttg catagcttcc acttctgtat tatggaatgc atggagggcc agatgctgga      120
ctttactata atcctttttg aagaaaaagt gatttgccaa atggttcaat accatagggt      180
tgctaggatc aatagtatag gctctggaaa gaagctggac accattttta atggaatcag      240
cctctttatt gttgagttct agaacagcca gtccaaccaa tgctcccacg catttggaat      300
tgagttccag ggctctgctg aatgccagac gagctttttc cagtttggtta agtttcacaa      360
agcaatgacc cattcctaaa cnaacttccg ctggacattc ctgggttaag tacctnnggc      420
cnggaccacg c

```

&lt;210&gt; 123

&lt;211&gt; 504

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(504)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 123

```

actggctgtc ctctgaggca ccttggtgtc tttccacaa tggtttattt tcctccagta      60
ggctagactg gcttccttat ttggcagttt cagggcagca tttcaaaagc aggaagggtg      120
aagtggcaag gccccttgag gccctttctt cagagctcac acagtgtcac ctttaccaca      180
ttctatttgt caaagcaact tccaggccag ccaaaattca aagggtgagg tagtagactc      240
tacctctttt ttcttttgag acagaattgc gctctattgc ccactctgga gtgcagtagc      300
agcctcatgg ctcaactgcag cctcaacctc ctgggctcaa gcgatccttc catctcagcc      360

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tcccagtag	ctaggaccac	aggcacatac	caccacagtc	agctaattaa	aacatttttt	420
ttggtagaag	atgggttctc	acttttttgc	ccaagctgat	catgaactcc	tggccacntt	480
ngggcnnttc	aaggggnaac	cccc				504

<210> 124  
 <211> 632  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(632)  
 <223> n = A,T,C or G

<400> 124						
ggtacaaaaca	cagtaaagaa	caacacagat	accagtcctg	cctttatcag	gaaagacaaa	60
acaaaaacaa	aaagtaaaca	ttccagtaaa	ggaatgatta	gtgctattat	gacaaggaaa	120
gcatagggaa	ctattcgatc	aaagaagaga	ggttacagtt	ccccaaatct	agggtgtttg	180
gaaaggaaga	atatccttag	taaatgacat	tgaagctaaa	acctaaacta	tgtatagcag	240
tcagctagaa	aaaacaggca	agaaagaata	tttcaggtgg	agagaaacac	atgttttcag	300
gccaaaagct	ggagaacaag	gtgagtttaa	agaactgana	gaggtttagt	gattacaatn	360
ggtgaacaaa	agggggggcat	tgtggaatga	atannaaaga	ntggttttgt	anattggaat	420
ctctgcagca	aaactccatt	cagaagggtat	aagttcangc	cttgggtgggt	tactttggna	480
aggccgtagt	gggccaggag	nttcattgntn	cancttgggc	caaaaagnng	agaacccatt	540
ttttccaaaa	anaatgnntt	naatttacct	ncntgggggg	ggaatgnncn	tngggtcctt	600
anttctttgg	aanggtttta	attgnaaggt	...			632

<210> 125  
 <211> 496  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(496)  
 <223> n = A,T,C or G

<400> 125						
acaagattag	gaggggggaa	aaacctgaac	aaatcctgga	acacacctat	gtattttacgt	60
catgggaaaa	ggggagagaa	cacttcaaata	atcaacaagt	tctgcgccat	taactcatta	120
atagctaaat	ggccacacca	aattgcatgt	gaatgttaga	acctctcaga	tagccacaat	180
aagtccatat	ttttttttta	aaaaaggaaa	acacagaaat	aactaccaac	agtgtctgag	240
aagagagact	aagttaacat	acattgcatg	tattgcaggc	aaggcagagg	cattttttta	300
aagctttttg	acagacttca	tataatctta	aaaaaaatat	gcaggccttt	gcaagatttg	360
acttgctgaa	atccaaacaa	ttttgactca	tgaaaagtca	taagacttca	gctgaaaaaa	420
aagaaaaaag	ttccagcctt	agaccaaaaa	aaaaaacctg	gaanagtntg	atagatttaa	480
cnanggtngg	cacgct					496

<210> 126  
 <211> 631  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(631)  
 <223> n = A,T,C or G

<400> 126  
 ggtacacctt gttaccaa at aggttggtct cttccccacc cacctttgag cttttgctct 60  
 aaaatacatt cagggtccaa gcctgaccat ccttggttaa tctatcatat tcttccaggt 120  
 tttttttttt ggtctaaggc tggaaactttt ttcttttttt tcagctgaag tcttatgact 180  
 tttcatgagt caaaattggt tggatttcag caagtcaaat cttgcaaagg cctgcatatt 240  
 ttttttaaga ttatatgaag tctgtgcaaa agctttaaaa aaatgcctct gccttgcttg 300  
 caatacatgc aatgtatggt aacttaagtc tctcttctca gacactgttg gtagttattt 360  
 ctgtgttttc cttttttaaa aaaaaatatg gacttattgt ggctatctga gaggggtctaa 420  
 cattcacatg ccaatttggg ggtggnccatt taactattaa tggagttaat gggcccaaaa 480  
 cttggtgata ttttnaaggg gtctcttccc ntttttccaa tgccgtaant cntttngggg 540  
 tggttccagg aatttgntcc aggnnttttc cccnccctaa aatnttgaac cttgnccngg 600  
 cngncccttt caaagggcna attnnanccn t 631

<210> 127  
 <211> 518  
 <212> DNA  
 <213> Homo sapiens

<400> 127  
 cagggtactcg gtgcttccca acacctcctt attggaaaac agccaaggag atgggtggcta 60  
 actggaggca tcacccagca gtgggtggagc agtggagcaa ggtcatttgt gcactcactt 120  
 ccagattgct acgctttaca tatggtcctt catttcctgc atttaaagtt cccgatgaag 180  
 atgccagtct gatccctcca gaaatggata atgagtgtgt tgcacagaca tggtttcgct 240  
 ttttacacat gttaagtaat cctgtggatt tgagtaacct agctattata agctctactc 300  
 ccaaatttca ggaacagttc ttgaatgtga gcggaatgcc gcaagaattg aatcagtatc 360  
 cctgccttaa acatctgcct caaatatttt ttcgtgccat gcgtggaatc agctgtctgg 420  
 tggatgcatt cttagggtatt tctagacccc gatcagacag tgctcccca acacccgtga 480  
 atagattaag tatgcctcaa agtgcgtgctg tcagtacc 518

<210> 128  
 <211> 865  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(865)  
 <223> n = A,T,C or G

<400> 128  
 accaaaggat agctgttctg ttttaagtagg gacctctcat ggcctacagg ctttgacatc 60  
 tgagaatcaa actggagaac attccgaagc cggtcttata agtgtctcca tctctacctg 120  
 ggctgaaatg gaatgtgca atgtagccca gcctggctct tgggtgttgc cagttgattg 180  
 atgactggga gccaaagtgg catctccttt gacctaaacg ggcgatgatg aaataaaact 240  
 caacagcctt tctctcatct tgcattgtga gatgcgaaat agagcgtgtc tctctgcctc 300  
 tcatttttagg ctgaggccgt ccaaagcggc catgcccatt gtttccacta gatggcgctg 360  
 acacttcagg catcaacct catggcctct cagccttgca aaggcagcca cttaaagtcg 420  
 gtgtcctgtg tggggcacca agctgagctg cagacaccca gtaggcgcga ggcaaatgag 480

tcccatttta	agaggcttgt	atztatgagc	tctttgcttc	ctccctccca	ctatctttaa	540
agaattgctc	tccatctcct	ttggcaaaagt	tcccttgccc	tttgnccttat	ttttgtgaaa	600
cccttcaagg	tatttccagt	ccatttgcac	ccaatctggc	atctttacng	aanagcggtc	660
tcatatgcta	ttggtggtaa	cgtgggacta	gtatttatgn	ggttgagaac	cacttggtcg	720
tttgtcaagg	aaaagtgtgc	ccaaaaacca	agaagtacct	ttggccgnga	accacgctta	780
aggccgaaat	tctgnagata	tncnntcaca	cttgccgggc	cggttcgaac	cttgcatnta	840
aanggnccca	atttggccct	tatag				865

<210> 129  
 <211> 910  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (910)  
 <223> n = A,T,C or G

tactctttgt	tttggcacac	ttttcctgac	aaacagc ag	tgtttctcaac	acataaatac	60
tagtccacgt	taacaacaat	agcatatgag	accgctctcc	gtaaagatgc	cagattggat	120
gcaaattggac	tggaaatacc	ttggagggtt	tcacaaaaat	aagacaaagg	gcaaagggaac	180
tttgccaaag	gagatggaga	gcaattcttt	aaagatagtg	ggagggagga	agcaaagagc	240
tcataaatac	aagcctctta	aaatgggacg	catttgccctc	gcgcctactg	ggtgtctgca	300
gctcagcttg	gtgccccaca	caggacaccg	actttaagtg	gctgcctttg	caaggctgag	360
aggccatgag	ggttgatgcc	tgaagtgtca	gcgccatcta	gtggaaacat	ggggcatggc	420
cgctttggac	ggcctcagcc	taaaatgaga	ggcagagaga	cacgctctat	ttcgcctctc	480
acaatgcaag	atgagagaaa	ggctgttgag	ttttatttca	tcacgcgccg	tttaggtcaa	540
aggagatgcc	actttggctc	ccagtcacat	atcaactggc	aacacccaag	gaccaggctg	600
ggctacattt	gcacattcca	tttcagccca	ggtagagatg	gagaccttat	aagaacngct	660
tcngaattgg	ctncagtttt	gaatctcaga	tgtcaaaagc	ctgtaagncc	atgaaaggct	720
cctacttaaa	ccggaaccag	ctatcctttg	gnanctggcc	gggcccggcc	ggttcgaaaa	780
gggcgaaatt	ccacaccact	tgggcggccc	gttacttaan	ggaatcccga	actttggnan	840
cccaagcatt	ggcggtaaat	catgggccat	anctgggttt	cctggggggg	aaaatggtat	900
tcccttccca						910

<210> 130  
 <211> 932  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (932)  
 <223> n = A,T,C or G

taccgcttgt	ttatccaaat	tttctctctg	aagtggagca	tctgctagga	tcaatagcag	60
cagtgttaag	caggaagcta	cattctgttc	ccaaagggat	ggcgatacct	ctttgaataa	120
agccctatcc	tcaagtgtctg	atgatgcgtc	tttggttaat	gcctcaattt	ccagctctgt	180
gaaagctact	tctccagtga	aatctactac	atctatcact	gatgctaaaa	gttgtgaggg	240
acaaaatcct	gagctacttc	caaaaactcc	tattagtcct	ctgaaaacgg	gggtatcgaa	300
accaattgtg	aagtcaactt	tatcccagac	agttccatcc	aagggagaat	taagtagaga	360

aatttgtctg	caatctcaat	ctaaagacaa	atctacgaca	ccaggaggaa	caggaattaa	420
gccttttcctg	gaacgccttg	gagagcgctg	tcaagaacat	agcaaagaaa	gtccagctcg	480
tagcacaccc	cacagaaccc	ccattattac	tccaaatcaa	aggccatcca	agaaagatta	540
ttcaagcaag	acacatcttc	atctactacc	catttagcac	aacagctcaa	gcaggaaccg	600
tcaaaaagaa	ctagcatgtc	ttcgtggccc	gatttgacaa	gggcaatatt	atggagggtgc	660
agaaaaaggc	nggaaactca	aaaagcnaac	cacctnggaa	anccaaacng	ggaaaacttc	720
acttgtcaag	agcactcccc	ttnaaaaaaa	ccnccccaag	ggggtttnca	aaaactcagt	780
cccnttcggg	taaccngaaa	aagggggacc	cgaaaacccc	cganaccng	gccccaaaaat	840
tntaggacct	tgccccggcg	ggcccgnntc	aaaangggcg	aaatttttgg	gaaaatccat	900
tnnncctngg	cggggcnggt	tttgaccatt	cn			932

&lt;210&gt; 131

&lt;211&gt; 890

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(890)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 131

actagaattt	ttggctggta	tctggttttc	ggtcaccttt	tctgttactg	gaagtgactg	60
agttttttgaa	acaccttggg	gtttttttgag	gggagtgttc	tgacagtgag	tttcctgttt	120
ggttttctagt	tgtttgcttt	ttgagtttcc	gcctttttct	gcactccata	tattgccctt	180
gtcaaatcgg	ccacgaagac	atgtagtctc	tttttgacgt	tcctgcttga	gctgttgctg	240
taaatgggta	gtagatgaaq	atgtgtcttg	cttgaataat	ctttcttggg	tggtcctttgt	300
atltggagta	ataatggggg	ttctgtgggg	tgtgctacga	gctggacttt	ctttgctatg	360
ttcttgacaa	cgctctccaa	agcgttccag	gaaaggctta	attcctgttc	ctcctgggtg	420
cgtagatttg	tcttttagatt	gagattgcag	acaaatttct	ctacttaatt	ctcccttggg	480
tggaactgtc	tgggataaaq	ttgacttcac	aattgggttc	gatacccccg	ttttcagagg	540
actaatagga	gtttttggaa	gtagctcagg	atlttgccct	cacaactttt	agcatcagtg	600
atagatgtag	tagatttcac	tggagaagta	gctttcacag	agctggaaat	tgaggcatta	660
accaaagacg	catcatcaag	cacttgagga	tagggcttta	ttcaaagagg	tatcggtatc	720
cctttgggga	accagaatgg	aagcttnctg	cttaacactg	ntgctatgga	cctanccana	780
agctccactt	tgcanaagga	aaatttggat	aaaccagccg	ganccttggc	cggggaancac	840
gcttanggcc	gaattccnca	cacctgggag	gncggttacc	taagggaacc		890

&lt;210&gt; 132

&lt;211&gt; 606

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(606)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 132

actcaggcac	ttcacagttt	acttgaaaqa	ggcttttgaa	aatagataaa	gtgaaagaag	60
aataaataca	tatttttaat	atgttaattt	taaaaatcct	ttataatcag	gactaagctc	120
tggtttgcag	aagctgtcac	ttacctgaa	acacagtatc	aaaagggaag	cttaaaacat	180
actgtttgat	ttttttattt	cctcttacia	tccatgtttt	caggtagaat	tatgactttc	240

ccccattgt	tacacatttc	tttacaaagg	aggcctgtag	aaattggaca	cgatcatgct	300
tgagcatgtg	agttagtcaa	attatgagtc	cctgcctatt	gtccattaca	caccgaatgt	360
taattttaaga	accagaggca	gaagtctctg	cttcctgctt	gaaacccaat	tcttatatga	420
aaatttttaa	aagccagaac	ctagcagccc	atctgntttt	tctcttttgc	cggnatgtt	480
gganccttgg	cggaacacc	cttanggggn	aattcngnnc	acttgggggc	cggtacttan	540
ggganccaac	tttgggccca	annttgggga	aancagggcn	anattngtnc	ctggggnaaa	600
tggtnn						606

<210> 133  
 <211> 606  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(606)  
 <223> n = A,T,C or G

<400> 133						
ggtaacttttc	cttaatcttc	ttcttcttct	tcttgtcacc	atccttcttt	tcttcttctc	60
catcagaacc	aacatcttca	atttcagggt	tgtcttccga	ctctttctct	tctttttctt	120
tttcttcttc	tttgtcttcc	ttttcttcag	cctcatcatc	gcttacttct	ttatcacgtt	180
ccttctccac	aaaaagagta	atgggatatc	caataaactg	agaatgtttc	ttcacaatct	240
cctttattct	tcgttcctcc	aagtacttta	aatttagtgg	ttgctggagc	acctaaaagt	300
cagattgtca	tggtggaagc	ctctgcagag	aacattttac	agcaggactt	ttgccatgct	360
atcaaagtgg	gagtgaata	taccaacaa	ataattcagg	gcattcagca	gttggtaaaa	420
gaaactggtg	ttaccaagag	gcacctcaga	aggatatttac	cccttcgcag	agaatgngaa	480
atatactcat	aaacctgcta	tggagagact	ctatgcagtt	ttacagatac	gagcatgaca	540
aggttcngga	gatgaagctg	taccaaataa	gatagatccn	gnnggaccact	aaangaaaaat	600
tccgag						606

<210> 134  
 <211> 598  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(598)  
 <223> n = A,T,C or G

<400> 134						
tacntcacca	tcccgtat	gctgctgtnc	canaaggcat	ngncaaattg	agggtcatac	60
tngatagcan	cagggtaaac	tgtggctcca	atttcaaaaac	ttncctttat	gaacatcatc	120
accgangtat	tattgatgca	ggntccttct	gngaagatga	ggataggcag	ctngctttta	180
tcttgacat	gttcannnan	nctnttagcc	accanntggc	natccttcac	ttccgagcgc	240
tcaaaccaga	cgtgtggncn	ggccttcacc	atggntctct	gaatcacacc	catgagtccc	300
cogtgcactt	gaccacccat	ggcataatan	ccatcgctgg	ccaagatgat	cacatcgatc	360
ggtgaggnat	gattggccac	acagatgccca	ccatttcttg	gtctgntttc	cctgtcatgg	420
taggtgatga	tggctgtcag	cgctcgcacg	cagatccggg	aacacattaa	ctgaacatgt	480
ttactcatga	actccttaaa	cctcccattt	ggangtatac	ccaccacagn	tgtgcccacc	540
accagaaggc	taatccctgt	gaaagccagt	gctatcctga	gcggcancag	aaagcagt	598

<210> 135  
 <211> 617  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(617)  
 <223> n = A,T,C or G

<400> 135  
 actgctttct gctgccgctc angatagcac tggctttcac agggattagc cttctgggtg 60  
 tgggcacaac tgtggnggga tacttgccaa atgggaggnt taaggagttc atgagtnaac 120  
 atgtncactt aatgtgttac cggatctgcg tgcgagcgct gacagccatc atcacctacc 180  
 atgacaggga aaacanacca agaaatggtg gcatctgngt ggccaancat acctcaccga 240  
 tcgatgtgat catcttggcc ancgatggct attatgccat ggtgngtcan gtgcacngcg 300  
 gactcatggg tgtgattnag agagccatgg ngaanngcct gcccacacgt ctggtttgag 360  
 cgctcggaag tgaatgatcg ncacctgggtg gntaananac tgactganca tgtgcangat 420  
 aanngcnagc tggctatnct catcttccca gangganccct gcatcaatna tacatcgntg 480  
 atgatgttca aaaaggggaag ttttgaactt ggagccacag ttaccctga tgctntcaag 540  
 tatgaccctg aatttgncca tgccttctgg aacagnagca aatncngtat ggngactanc 600  
 ctccgncggn ancacgc 617

<210> 136  
 <211> 610  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(610)  
 <223> n = A,T,C or G

<400> 136  
 cgtgccgtag gccggaatgt taccggctgt tggatctgcg gatgaggagg aggatcctgc 60  
 ggaggaggat tgtcctgaat tggttcccat tgagacgacg caaagcgagg aggaggaaaa 120  
 gtctggcctc ggcgccaaga tcccagtcac aattatcacc gggatatttag gtgctgggaa 180  
 gacaacactt ctgaactata ttttgacaga gcaacatagt aaaagagtag cggtcatttt 240  
 aaatgaattt ggggaaggaa gtgcgctgga gaaatcctta gctgtcagcc aagggtggaga 300  
 gctctatgaa gagtggctgg aacttagaaa cggttgcctc tgctgttnag tgaaggacag 360  
 tggccttaga gctattgaga atttgatcaa aagaaagggg aaatttnatt acatactggg 420  
 agagacnctg gattanccng accctgggtc cantggcttn tantgttttg ggttgaagct 480  
 tnaattaggg nnngtnttta acttggaggg ttnttacttt tgggggttca antttgggtt 540  
 aaactttttn cnaaaaaaac cttgangcct tnttaatgan nnttttngca agttttttgc 600  
 canagccttt 610

<210> 137  
 <211> 645  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature



&lt;222&gt; (1)...(645)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 137

acaattccaa	gtgcttatag	ccaatataag	catatttcat	attagaaata	gttatccata	60
tgtaacaag	aaactatggg	cctcaaatat	gccaatTTta	gagtctaata	actactgata	120
gtaactatgt	aaatatTTtg	gaataaacag	ttattttacgc	aagccacact	tcagctgaga	180
tgatcactag	acatctgttt	ccagagcttc	aacaatgtgt	gcagcagaag	gacgatcttt	240
agggtcttca	ttagtgcata	cagagaagag	ttcaattact	ttctggtagt	attcatccag	300
ttcttccata	ttaatagggtg	gcctagttcc	caaggctgca	tagtatgctt	catcatcaaa	360
atcacttttca	tcaaaagttt	tatcttcatc	atcatcatca	tttgaaagat	taatgtgtgg	420
aaatccgata	aaagtcatca	tttcccacaa	agtaagggcc	aangccaaat	atgtctggcc	480
tggccagtaa	taaccaccca	tcttcttcac	aggnttcttt	tggggtttnc	atggnttctg	540
ggnccaatgg	taaccaggnc	ctaangggtc	aggtcccggg	cataattttc	aatnccngg	600
gganaaaaag	acctcctaaa	nttnccagaa	tttnaatngg	ttcna		645

&lt;210&gt; 138

&lt;211&gt; 612

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(612)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 138

ggtactcctg	gtcacttaag	atctgatact	gaacattcta	caaatgaagt	tgggacttta	60
tgtcataaaa	ctgatTTaaa	taatcttgaa	atggccatta	aggaagatca	gattgcagat	120
aactttcaag	gaatatcagg	tcctaaagaa	gacagcacia	gtataaagg	aattcagacc	180
aggattcttt	tcttcatgag	aattcgTTac	accaagaaga	gagtcaaaaa	gaaaatatgc	240
cttgtgggga	aacagcagaa	tttaaacaaa	agcaaagtgt	taacaaagga	aaacaaggaa	300
aggagcaaaa	tcaggactca	cagacagagg	cagaagagct	acgcaaactt	tggaaaaccc	360
atactatgca	acaaactaaa	cagcanagg	aaaatattca	acaagtgtca	caaanagaag	420
ctaagcataa	aattacatct	gctgatggac	acatagaaag	gtctgcactt	ttaaaagaaa	480
agcanaggca	tcgattacat	aagttcttgg	gtcttagagt	tgggaaaacc	aatgaggaaa	540
accgtttgga	tnntaaggcc	aggtgctacc	aatgccaccg	tntgccngag	ggttaagaaa	600
cctnaatntt	gg					612

&lt;210&gt; 139

&lt;211&gt; 592

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(592)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 139

ggtactccac	ttcttccctat	tggaagatta	acattatttta	ccaagaagga	cttaagggag	60
taagggcg	agatttagcat	tgctcaagag	tatgtaaaaa	aaaaaaaaaa	aaaagaacca	120
aaccactgga	aataatcaaa	tgcaaaaagg	taacaaattc	ataactggaa	agcaaagaga	180

agaacaagta	tgatttggat	gataaagcat	tgttttaaatg	gtgaaaactt	cacagatcac	240
taatgtttct	agaggttaac	ttcaagtggg	caagctgggg	tttttaggta	gtcagtggcc	300
tagttcctaa	agccacagta	taggatctgt	taaactgaat	gtctgttgaa	agtttgggtt	360
agctgcttgg	aggcttcctt	ttaagacaaa	ctgtatgtga	ttaagttgtt	tttgagggaa	420
ctgaagacct	gatgtacccc	tggccagata	actgcctgat	tctcagatat	tattctctgg	480
gaaacatcta	catacacagg	agcttaaant	ggcattatct	cttgcctaaa	ttcagagatn	540
ttttgnactt	gccggnngcc	gtcnaanggc	gaatccgcac	ctggcgccgt	ac	592

<210> 140  
 <211> 618  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (618)  
 <223> n = A,T,C or G

ggtncttaca	cgtaagattt	tagcctatgg	tcattttata	aagatgactg	ttaggattta	60
attcacattt	aaagaaaatg	agattcggtta	tattatgggtg	tttttatgac	ctataaaata	120
cttaccctta	caaatttcca	taaatgtagt	ggtagtataa	gcttttttct	tactgaaaaa	180
taatgccagg	taaccaagta	ttattccttc	catcatttat	ttaggaaaaa	gttttatgta	240
ttagggtaaa	gtggtagaag	ttaacctaga	atctaataat	ctccaatcac	ccattcctga	300
tctaataagt	agccatgaga	aaaaatctct	agaaagaatc	atacctctca	aaaaataaaa	360
tatnaaacia	aggctgggtg	cagtggctca	cacctgtaat	ctnagcactt	cccngaagtt	420
gaggtgggca	gatcgcttga	gcctaggcat	atcgcttgna	gcctgggcaa	ctgtggccaa	480
accggtcttn	tacaaaaaaa	atcncnaaag	tagcccgggc	ttaggggccat	accacctnga	540
gcccagggan	ggtnaagnct	accttggaac	ngtgattgga	ncctgcccng	gtggnctgtc	600
gaaaaggcgn	naaatnnt					618

<210> 141  
 <211> 551  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (551)  
 <223> n = A,T,C or G

ggtaacttcaa	actctcttaa	cggtgatgct	ctgacattca	ctactacatt	tactctgcaa	60
gatgtatcca	atgactttga	aataaatatt	gaagttttaca	gcttggtgca	aaagaaagat	120
ccctcaggcc	ttgataagaa	gaaaaaaaca	tccaagtcca	aggctattac	tccaaagcga	180
ctcctcacat	ctataaccac	aaaaagcaac	attcattctt	cagtcatggc	cagtcaggga	240
ggctcttagtg	ctgtgcgaac	cagcaacttc	gcccttggtg	gatcttacac	attatcattg	300
tcttcagtag	gaaataactaa	gtttgttctg	gacaagggtcc	cctttttatc	ttctttggaa	360
ggtcataattt	atttaaaaaat	aaaatgtcaa	gtgaattcca	gtgttgaaga	aagaggtttt	420
ctaaccatat	ttgaagatgt	tagtggtttt	gggtgcctggc	atcgaagatg	gtgtgtcttt	480
tctggaaact	ggatatctta	ttggacttaa	cccgatgatg	agaancgcaa	ggtaatttat	540
atagtacctg	c					551

<210> 142  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(601)  
 <223> n = A,T,C or G

<400> 142  
 cgagggtacat ggtctatgcc tcccaggaga cgttcgggat gaaattgtca gtgtaaaacc 60  
 agaaaaaatg catctcttct agaattgttt aaacccttac caaggaaaaa aaaggggtgt 120  
 taccaactga gatcgatcag ttcattccaat cacagatcat gaaacagtag tggtccacc 180  
 taggagtgtt gggaagtgtt gtttgtgttt caagcagaaa aactgagctc caagttagca 240  
 cattcagctt tggaaactat attattttaat gtgggctagc ttgttttcaa atttttaaag 300  
 tttaaaaata aaatactttg cattctaagt tgccaataaa atagaccttc aagttatttt 360  
 aatgctcttt tctcactaat aggaacttgt aattccagca gtaattttaa ggctttcaga 420  
 gagaccctga gtcttctctt caggttcaca gaaccgcg nctttttggg tagaagtttt 480  
 ctactcagct agagagatct cctaagagga tcttttngc ctgagttgtg aangcaccnc 540  
 ngcaaacgca ttgccttcca nttggcacaa acnccggtna acggcttgtg ttaaaaaccg 600  
 c 601

<210> 143  
 <211> 515  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(515)  
 <223> n = A,T,C or G

<400> 143  
 ggtnncgtaa agaatatatc ttatctggag cttagcctca atcatgtctt aacaaaatga 60  
 caggtctnan aaagggggag ctcaatagct caaaagttagc aagtcctttt cacagcaccg 120  
 ttctcagaac acctctgagt aacgtgtttg ccagtagcta ttctcactga tgcactgatg 180  
 gccctgaaga agcggatcca gtcacatagg aaaggagggt gtgttagtga aagcacatgg 240  
 aaggtgttgn tttagaaagg tagtcaggaa aaacattcag gaatagattt atacaccatt 300  
 attgnattat ttntaaattt tcattcactc ttctgttttg atacttttgc taattaaccg 360  
 tcctatgtta atanccacca aagctataag tccatagtagc gtaaaacatt ccccttgggc 420  
 tgtctgagct aaaagcantg gcctctccgn atgtnggaca tccnagaaat agnttggtac 480  
 ctgcccnggc cgnnctgttct taaggctaata ccngg 515

<210> 144  
 <211> 436  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(436)  
 <223> n = A,T,C or G

<400> 144  
 ggtaccgctc aggattccca tcccaagaca cccggtcctt aaaccgcca ctcatgggtt 60  
 ggaagggtc tatgtggtag tagaatacaa actgctcagg tccccgtct agaggacgaa 120  
 aattccaggt cactgttaga gcatcaccca caggggcaaa gctggagaaa gtgcatttta 180  
 accgagcatc tgtccatta acagcctcca gcacccggga ggtataaatt tccacagctg 240  
 ctataggcca aagagctgtg agctgtatgc caaggagaag aagcaccgca cgagtagagc 300  
 tcttgccata catgagggaa accagcctt ggccccagag accggacggg gcagaccgag 360  
 ggctccaaca ccctgccaaag gccactccgg gaggagcaag caccgcgttt tnccagagag 420  
 aggagtttga gttgag 436

<210> 145  
 <211> 441  
 <212> DNA  
 <213> Homo sapiens

<400> 145  
 ggtacatccc cactatcatc cgccgggatg acccctccat catcccatc ctctacgacc 60  
 atgagcacgc aaccttcgag gacatccttg aggagataga gaggaagctg aacgtctacc 120  
 acaaggagc caagatctgg aaaatgctga ttttctgcc gggaggtcct ggacacctct 180  
 atctcctcaa gaacaagggtg gccacctttg ccaaagtga gaaggaagag gacatgatcc 240  
 acttctggaa gcggctgagc cgctgatga gcaaagtga cccagagccg aacgtcatcc 300  
 acatcatggg ctgctacatt ctggggaacc ccaatggaga gaagctgttc cagaacctca 360  
 ggacctcat gactccttat agggtcacct tcgagtcacc cctggagctc tcagcccaag 420  
 ggaagcagat gatcgagacg t 441

<210> 146  
 <211> 624  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (624)  
 <223> n = A,T,C or G

<400> 146  
 acgtctcgat catctgcttc ccttgggctg agagctccag gggtgactcg aaggtgacct 60  
 tataaggagt catgaggggtc ctgaggttct ggaacagctt ctctccattg gggttcccca 120  
 gaatgtagca gcccatgatg tggatgacgt tcggctctgg gttcactttg ctcatcaggc 180  
 ggctcagccg cttccagaag tgaatcatgt cctcttcctt ctccactttg gcaaagggtg 240  
 ccaccttgtt cttgaggaga tagaggtgtc caggacctcc ctggcagaaa atcagcattt 300  
 tccagatctt ggctcccttg tggtagacgt tcagcttctt ctctatctcc tcaaggatgt 360  
 cctcgaagggt tgcgtgctca tggctgtana ggatggggat gatggaagggt gtcacccgc 420  
 ngatgaatag tgggggatgt accttggccg ngaacacgct taagggccaa ttccannaca 480  
 cttgccggcc gttactaaag ggatnncaac tttngnacca aacttggcnn aaacaatggg 540  
 ccnaacttgg ttccttggng aaaatggttt ccctcaaat tcccccaan ttacnaccgg 600  
 aaccttaag ggaaaacctt gggg 624

<210> 147  
 <211> 599  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(599)  
 <223> n = A,T,C or G

<400> 147  
 cgaggtacaa gctttttttt tttttttttt tttttttttt cttttttttt tttttttttt 60  
 tttttttttt tttttttgaa cncanattcan tttattggca tggntttgtt tnaaaaaaag 120  
 gaaaagngnc aaanccaaaa nacanacttt gntaaciaat ncctgggggn ggctggacnt 180  
 ttttgcttaa tgctgngcaa anagggggat cctggcccan acatccngct gattccttgg 240  
 nacaagggtg tntgcctggg cctaantgcn cctttttgaa tacttgnttg caaaccacac 300  
 ntccantttt aatttccagg ggcagntnat naccctnnat ccactgggtc cagccacgcc 360  
 cntcntttta acccttttgc anacactgga gcttgntccg tcccagntca ctgnngnatg 420  
 cnccttgccgn catttatgcc tgtcaaacct ctaaaactcn ttcccacctg gaagccatgg 480  
 angtagttcc taaaaaggct caacgngccg aagaacaana tgggccccgg cctggacaaa 540  
 actttttggc ngggttaaac aagttggcna ttttcccaag gnccanttgc ctnnnggcc 599

<210> 148  
 <211> 609  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(609)  
 <223> n = A,T,C or G

<400> 148  
 ggtacttaag taatccaaag ctcgatcctg atctgcatga attagcatca taaatgcatt 60  
 cctttttcaa cttgcatcct tctcattcac cagaaaaatca tgtatcagtt caggagcatc 120  
 aggtataaga tgttcaaaat ttctatagat ggtatagatg gccaaaacag catttcttct 180  
 aacatagctg tgtcgatgct ccaaacatgc acgaatagct ggcattaaag gttctagcaa 240  
 ttctgcttct ttcaatttgc aaagaaaacg aagagtagat cctcgaataa attcattagg 300  
 atgttgaaga tcctttctgt atgcatcaca tacaaggatc atctcatgta aaagtctccc 360  
 atctggagtt gttttaggaa caatttccca aaataccaga agtaatttct tgatagtgtg 420  
 atcctgaaga aggtagcaca naacgaatgg atggatcatca gaaagtnacg gaagtttttc 480  
 accaattcag aatcataatg gattaccttt cttcaaagct tcagtctttg actttacttc 540  
 ttcttttttc taaaatcatt ttttaagctt aatttccaaa tgggnggggtc ttgaatccat 600  
 gggcncgtn 609

<210> 149  
 <211> 589  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(589)  
 <223> n = A,T,C or G

<400> 149  
 actcaggtag aaccatcatg aaaatgaccc acagtgaact tatggaaaag ttcttaacag 60

attattttaa	tgacctccag	ggctcgcaatg	atgatgacgc	cagtggcact	tgggacttct	120
atggcagctc	tgtttgtgaa	ccagatgatg	aaagtggcta	tgatgtttta	gccaaacccc	180
caggaccaga	agaccaggat	gatgatgacg	atgcctatag	cgatgtgttt	gaatttgaat	240
tttcagagac	ccccctctta	ccgtgttata	acatccaagt	atctgtggct	cagggggccac	300
gaaactggct	actgctttcg	gatgtcctta	agaaattgaa	aatgtcctcc	gcatatttctg	360
ctgcaatttt	ccaaacgtgg	aaattgtcac	cattgcagag	gcagaatttt	atcggcaggt	420
ttctgcaagt	ctcttggtct	cttcttcaaa	gacctggaac	cttcaaccct	gaaagtaagg	480
agctggtaga	tctggtggaa	ttcacgaacg	aaatcaaact	ctgctgggct	cctctgtana	540
gtgctccacc	cagtgattgg	cctagacact	ctgggagcaa	ctggccccc		589

<210> 150  
 <211> 353  
 <212> DNA  
 <213> Homo sapiens

<400> 150						
ggtacaaaga	aatttttggat	agcaaaaataa	aggaatcttt	acccatagat	atagatcagc	60
tatcaggaag	ggacttctgc	cattcaaaga	aaatgacagg	aagtaacact	gaggaaatag	120
actcaagaat	ccgagatgca	ggtaatgata	gtgccagcac	tgctcctagg	agcactgagg	180
agtctctttc	tgaagatgtg	ttcacagaat	cagaactttc	ccctatacga	gaggagcttg	240
tatcttcaga	tgaactgcga	caagataaat	cttctgggtgc	gtcatcagaa	tctgtgcaaa	300
ctgtcaatca	ggctgaagta	gaaagtctga	cagtcaaact	agaatctact	ggt	353

<210> 151  
 <211> 492  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(492)  
 <223> n = A,T,C or G

<400> 151						
ggtacctact	ggtgctgaaa	aaaggaaaat	tccggcttga	aggaaaggag	tttagaactc	60
tgaaaatttg	gtgacattgt	ttttccctga	aagaaatgtg	tggttgattt	aacagatgaa	120
attatctgcc	ctccaaaagt	cctttagaag	agccagtgca	aggctgaaga	ccaaagcgctc	180
aagaacacgc	cagactctca	gcttcctctg	ctttgtctct	ttgttgagga	aatgcaaatg	240
caaagagctt	cccgttaaaa	acaaggagtg	tctgagagcc	acgtgttcaa	cacgcttctc	300
ctgctgctga	cccctctgca	cctgcagagg	cagtgagcac	ccaacagggtg	gcgccaaggc	360
gcccgtcaca	cgctcacgtc	ctctggccag	cagccacgtt	tattgaagga	gtgtggcact	420
gcccattcatt	ggatatgccc	cgggccatga	aggattccag	tggttcacgc	tgnccagtat	480
atacaaaaat	gt					492

<210> 152  
 <211> 597  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(597)  
 <223> n = A,T,C or G

```

<400> 152
ggtacataag cctaaacaat ttcacctagg taaaatattg atgtcataac caaactatat 60
ggccccgttt cataaagggtt actatattct atagagagtg aagagggtggc ctttctatcc 120
cagcttacct tattcttggt attgttcaaa ttctcctgaa gcttgcataa ctagctgcca 180
tcaggtaaat gctattggct agcagaagac tgcagttctg ttaatattag aaccagcagg 240
gggaacttgg gaacttgaca ttaaaaatct agaaacagaa ttttaggatg ggtctcgta 300
gaaacctgaa ttgttaatgg acttaagtaa aaaccatccc aaagaatttg agctttaagg 360
tgataaccgt cttttcagag atcatagcac atgaagaacc catggacact acacagacta 420
tgaaccggta gcagaaaaag atctcgtgac taaagtgggg gatgacagca aaaaaaaaaa 480
ttaccaaagg aaaaaagttg agaatncagg aatattacca gatggtaaaa aatattatct 540
tangccaaat gaggccttc ggattcccaa accttgcttc ttctcctttc gtcttgn 597

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```

<210> 153
<211> 596
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(596)
<223> n = A,T,C or G

```

```

<400> 153
actggttgct acccattttt tcaagtctag gtgatggctg ctcttttcca acttgcttg 60
ttaaccagga tcctgaacaa gcatctactc ctgcagggtc gaattccaca gctaaaaatc 120
tcgaaaacca tcagtttcct gcaaagccat tgagagagtc ccagagccac cttcttactg 180
attctcagtc ttggacggag agcagcataa acccaggaaa atgcaaagct ggtatgagca 240
atcctgcatt aaccatggaa aatgagactt aactcttcaa gcaagataaa ttcatacttt 300
ataaaagtat caatgctgta gatggatgga agaggcttcc cacaggaagg tgccaccagt 360
cagtttgctc ctatgtccct ttggctggaa atgcagaata tgaattgatt aagttctctt 420
ccaagccatt gcttaaaata taacatgttt tgggatccaa tacacacatt ggtacaacta 480
acacaaattc ctattaaata ttaaaagtag ttctgggtta ttaatcaacg gggaaaacat 540
tttttccaaa aaaacttgga ataaatccan ggaccagttt tancccaata tttggg 596

```

```

<210> 154
<211> 297
<212> DNA
<213> Homo sapiens

```

```

<400> 154
ggtacccagt ttcaaagctc tctggttttt tctaagaaat gaagcaagga taggaacccc 60
ttctcccaga acaggcctca aatctatctt caaagggtgac ccagcaatca gtgtcaatgc 120
ctttactgta gttaacctgg taatttcatt ctttagtctc tccaagaaaa tctgaagtgt 180
attaggcaag tcagaaccca aattgtctcc aagggtgcaa ataatttgtc ccatacagga 240
aatagccctt tccttgactt cctgatcaat gtcagctgct ttaatctct taatggt 297

```

```

<210> 155
<211> 594
<212> DNA
<213> Homo sapiens

```

```

<220>

```

<221> misc\_feature  
 <222> (1)...(594)  
 <223> n = A,T,C or G

<400> 155  
 ggtacttgaa ggagaacagt ttacatcggg cgtagccac cttgcaggag gagactactg 60  
 tgtctctgaa tactgtggac agcattgaga gttttgtggc tgacattaac agtggccatt 120  
 gggatactgt gttgcaggct atacagtctc tgaaattgcc agacaaaacc ctcatgacc 180  
 tctatgaaca ggttgttctg gaattgatag agctccgtga attgggtgct gccagggtcac 240  
 ttttgagaca gactgatccc atgatcatgt taaaacaaac acagccagag cgatatattc 300  
 atctggagaa ctttttggcc aggtcttact ttgatcctcg tgaggcatac ccagatggaa 360  
 gtagcanaga aaagagaaga gcagcaattg cccaggcctt agctggcgaa gtcaagtgtg 420  
 gtgcctncat ctcgctctcat ggcattgctg ggacaaggcc tgaagtggca gcacattcag 480  
 ggattgcttc ctctggtat gaccatagaa tttggttcga ggcaaggcac tgtcaaagat 540  
 gtggaagaag aaaagtttct acacactgag caggcttata agttnggcag aan 594

<210> 156  
 <211> 294  
 <212> DNA  
 <213> Homo sapiens

<400> 156  
 acaggatgca gtttctcagc tggattctga gctgatggac ataactaagc tttatgggga 60  
 atttgctgac ccattttaaac ttgcagagtg caaacttgca ataattcatt gtgccggtta 120  
 ttcagaccct atattggtgc agacactttt gcaagatatc atagagaaag aattgagtga 180  
 cagtgtgaca ttgagctcct cggatagaat gcattgctctt agtctcaaga ttgttctcct 240  
 tggcaaaatt tatgctggca caccacgctt ctttccctta gattttattg tacc 294

<210> 157  
 <211> 527  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(527)  
 <223> n = A,T,C or G

<400> 157  
 ggtactgatt gtcacacctga ctttggcatt ggcagctctt atattccgac gaatatatct 60  
 ggcaaacgaa tacatatctg actttgagtt ataatatggt tttgtgactt atgagctgtg 120  
 actcaactgc ttcattaaac attctgcatt ggggtataatc taagaattgt ttacaaaaag 180  
 attatcttctg atttaccctt cattcctttt tttgatcctt gtaagtttag tataaatata 240  
 tctagacatt cagactgtgt ctagcagtta cgtcctgctt aaagggacta gaagtcaaag 300  
 ttcttctgtc cactatttga tctgctttgc agggaaataa cttgnttttt ctcatgtttc 360  
 atcttctttt tatgtaaaatt tgtaataact tcctatatgg ccctttgaaa tttttggata 420  
 aaagatgatg gtttaagtgc caatgagtat tactaggtac tcaataccac ttattggagc 480  
 cctggccng ggcgggcgnt tcgaaanggc caaatncagc accactg 527

<210> 158  
 <211> 617  
 <212> DNA  
 <213> Homo sapiens



<220>  
 <221> misc\_feature  
 <222> (1)...(617)  
 <223> n = A,T,C or G

<400> 158  
 ggtactgaaa aagaggcgtg aggtgctccc tgtggatata accaccgcta aagatgcatg 60  
 tgtcaacaac agtgctctcg ggggagaagt ttatcgatta ccgcctcaga aagaggagac 120  
 acagtccctgc cctaacagtt tagaagataa caacttgcaa ttagaaaaat cagtttctat 180  
 acacacacca gtagtcagtc tctctcctca caaaaatctg cccgtggata tgcagctgaa 240  
 gaaggaaaaag aaatgtgtga aactcatagg agttcccgtc gacgctgagg ccttaagtga 300  
 aagaagtgga aacaccccta actctcccag gtcagtgtcc tcttttcctc caggcagcca 360  
 gcagacctct ccactctctc tctctcgtcg catgaactgt gctgnctgnt tctttatcta 420  
 ctttcttaca attgcatgca gtataattcc tcagtttcat ctacctacct tcaacttttn 480  
 cagaacttta agaaagactt aaactgattg caangggaaa ggactcttgg aataaggcaa 540  
 tcncattaaa aagttacncc tttctgggtt catgaaaggg atntcncagt ttaccccatn 600  
 tttgaaaggt ttatnng 617

<210> 159  
 <211> 1002  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(1002)  
 <223> n = A,T,C or G

<400> 159  
 ggtaccagct tacctatttg attcagttgc tgttttctca ctctctatat ccatttgaaa 60  
 ttgattttatt ttagatgttg tatacttacg ttaggctttc tgtaaatagt ggtttttctc 120  
 ctggtgacag agccaccgga ttatgacaca ggatgaggaa gattaaggat aatcaattga 180  
 ctaatttcat ttagaatatt atcaaacatt tcaactaggt atcagaaaaa ggctttcttt 240  
 cataagacta ttttaaataa aaattatttc aacaattaaa gtaatgttga ccatccccct 300  
 ctgagctgaa taaagaaaaa tttagttaa tttattgcaa ttttaattaca atactacctt 360  
 cacaacattt tcatgtgttt taaataaata ttttttaatt ggctaaagga cattcaagca 420  
 aagaaatgct ttctttactt aaaatgtcta tctcatttgc tgctttttca ctaagccttt 480  
 actttgttaa taaaagtgtc cattgtgtga tgtttttgat tttacagttt gctaaatctt 540  
 attttcttgg agttgctttt tggtaacagc tccattgcta ctccccattt tattggttta 600  
 catcaatgca tgcttcgttg tgatccctca agatgtaaca cttggtatgc tcggntgagg 660  
 atatgaaaaa atactttccg aaaccaggga attcagtgga tgnttggttt atctggttgg 720  
 ataagaaaag tagggncag ccttaagcag nacagaagcc nctggtanaa gcatagtcag 780  
 ggaacttttt ttaattcntt tangnctaag ggncaggagt ggattnnaaa gggaggagag 840  
 cccttattat ggcctatncc ccgntttgga gaagancctt actgggaacc tggccccggc 900  
 ggccgttcaa aagggcgaaa ttccgncacc tgggnggccg gttcttaagg anccnactt 960  
 gggcccaaan nttggggaaa nnnngggcna aannngntcc cg 1002

<210> 160  
 <211> 434  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(434)  
 <223> n = A,T,C or G

<400> 160  
 ggtacaagtc atcanggtca gcattctccc actttcaagt gcactaaca ggctgctggg 60  
 atttccactg gagtgtcaac agcagtattc ttgrrccagg aactctcaga atttgggggt 120  
 ccataacagg tttagcctat gaccaggtc caaaagttcc agccttctct gccacctcca 180  
 gagctagctt caggttcttg tcaaagagct cacacctgat aggcatttct aaggaataga 240  
 atggattctt gagggcaaa tctgagtaaa tctcataaat ctttcggaga agagaatcta 300  
 ttccagcttg cctaggatct gctagaacca caaacttgat ccctgtcagt gtctggtagc 360  
 agtgcaattt gaatgtgtct gctcncagca tctcaatgcc tgagcttncc tgttcangag 420  
 acagntggna gccca 434

<210> 161  
 <211> 652  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(652)  
 <223> n = A,T,C or G

<400> 161  
 acagaactcca aggggaagact ggggtccaaa gccacatgcc tttgttgcca gcgtcaagag 60  
 tgagaagact tttgtggggg gtcctcttaa ggcaaatgcc gagaacagga aagctactgg 120  
 gcatagtccc ctggaactgg tgggtcactt ggaagggatg ccctttgtca tggacttgcc 180  
 cttctggaaa ttaccccag agccaggaa ggggtcagtg gagcctctgg agccttcttc 240  
 tctccctcc caactcagca tcaagcaggc attttatggg aagctttcta aactccaaact 300  
 gagttccacc agctttaatt attcctctag ctctcccacc tttcccaaag gccttgctgg 360  
 aagtgtggtg cagctgagcc acaaagcaaa ctttggtgcg agccacagtg catcactttc 420  
 cttgcaaatg ttcactgaca gcagcacggt ggaaagcatc tcgctccagt gtgctgagc 480  
 cctgaaagcc atgatcatgt gccaggctg cgggtgcgtt tgtcacgatg actgtattgg 540  
 accctcaaag ctctgtgtat tgtgccttgt ggtgagataa taaattatgg ccatgggaaa 600  
 caaannanan nnnnnnnnaa aaaaaaagct tgnaccttgg ccgngaccac gc 652

<210> 162  
 <211> 638  
 <212> DNA  
 <213> Homo sapiens

<400> 162  
 ggtacttgaa gatttgcata aagccaacat tgcacacgct atgggtcacag gtgacagtat 60  
 gttgactgct gtctctgtgg ccagagattg tggaatgatt ctacctcagg ataaagtgat 120  
 tattgctgaa gcattacctc caaaggatgg gaaagttgcc aaaataaatt ggcattatgc 180  
 agactccctc acgcagtgca gtcattccatc agcaattgac ccagaggcta ttcgggttaa 240  
 attggtccat gatagcttag aggatcttca aatgactcgt tatcattttg caatgaatgg 300  
 aaaatcattc tcagtgtatc tggagcattt tcaagacctt gttcctaagt tgatggtgca 360  
 tggcacccgtg tttgcccgtg tggcacctga tcagaagaca cagttgatag aagcattgca 420  
 aaatgttgat tattttgttg ggatgtgtgg tgatggcgca aatgattgtg gtgctttgaa 480  
 gagggcacac ggaggcattt ccttatcgga gctcgaagct tcagtggcat ctccctttac 540

ctctaagact cctagtatctt cctgtgtgcc aaaccttatc aggggaaggcc gtgctgcttt 600  
aataacttcc ttctgtgtgt ttaaattcat ggcattgt 638

<210> 163  
<211> 1002  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(1002)  
<223> n = A,T,C or G

<400> 163  
acataataat atatatataa aatgaacata gttcatgctt tcagataaaa tgagtagatg 60  
tatatttaga ttaatttttt tagtcagaac ttcattgaaat ccacaccaaa ggaaaggtaa 120  
actgaaatct cccttggaac tatgtgaaat ctttttgtct ttatagtga acaaagccag 180  
agcatctttg tatattgcaa tatacttgaa aaaaatgaat gtattttttt ctccaaagaa 240  
cagcatgttt cactcaatgg tgaaaagggt gaaacattta tgtaacttta tgtgtatctg 300  
tcttgatata tactgacatt gtctatatga ggaaaatgat tactgggtcat gtcctgtga 360  
gttttttggg aaggtagggg catttctccc tgcctgcttt gtgccaacta gcatgttgca 420  
tctacatgca ttatgagtct ggtaggcat tactttaaac atacataaag agacagtagg 480  
acattgtggc tgagtctacc cagctcaagg taaaggagaa tattgctaatt ttttagcaa 540  
actagaccag cattattact caaactaaaa atatcacacc tgaaaaattt aatttaggac 600  
ctaaaatgtc tagattagct ttctgctttt tttatttgaa taactcattc agttgtgaat 660  
gaattcctct ttaattgggt ccacagtcac caaatgacaa ggatttgcca ctttcccccc 720  
aaatnggagt gcttgtaatt taggctctct accntnaaat cagtntaagg gaaccgtaat 780  
tatgatggat tttttccaag atgaccagct ggggtgaaaa ccatttttct ttggccaatg 840  
gcaaaactaa taagctttta aaacttcccc tttatgggga aagtttttaa actgggaaag 900  
gttangaacc naccntgga aancntgga agggaaaaaa anaaaggggn ccttggnccg 960  
gaacaccctt aaggggaatt cancccattg ggggccnttc nt 1002

<210> 164  
<211> 572  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(572)  
<223> n = A,T,C or G

<400> 164  
acagcatgca tttaacaacca gcgctgatct agtctatctt gtcataataa cttgaataca 60  
aaaatccaat ttaaataaga ctagacttac tataatagta aacaaacaaa aacaaaaaac 120  
aaaaaaaaaa aacacacaca gtagacttag tttgatactg attaatctta agagtaaact 180  
catcctgtcc cctcttaata ctctactgca atttattgat ggctagaata ttactgact 240  
taaaaaagggt attaaatact tgtatcatga aattacattc ttattaacaa taagacatac 300  
tgtgtaagaa aatagctcat gtgtgaaatg tgtctgaaat gcattttttt cttacaacta 360  
tcanaacatc cactcacact caaatgaaac cactcccaac cccccctgaa aaaatgtttna 420  
gggaagacng ggtgggctgg gggaggagca aggggaaggaa aagatttagc tatactaatt 480  
acagcacagt gattaacaat gggtcaggac agaaccaaca gaattnggca aaaaanngcc 540  
ctttaaacat ggntaccatt aaaaaccaac nn 572

<210> 165  
 <211> 594  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(594)  
 <223> n = A,T,C or G

<400> 165  
 ggtactggcc tcttggcact ctgctttttc actgactggc tactgaagag caaggcagag 60  
 .ctgggtggca tctcagaact ggcactctga cctccctaac tgggccccgc tgggtccatt 120  
 tgctcattag aatttcctct cacatcagtg ggatacagaa ttcagtttct cccttgccag 180  
 gtccttggga tgggtgaccc ctgcctctgc agtagccttt tgtgagtctg ctaaggtagc 240  
 tctcacacac ctcggtctct ggggttgata ctgagcctac aatagagccc tgaaatcaag 300  
 agcatagctt gagtgtgtga atatgatgtg tgcacatgct taatgagcgt gcaagtgtgc 360  
 acacgtttgt ggagaggagg gtgttctggc ctgagaaggt aaagaagagg catgtccagt 420  
 atgctttgca ggggtgtgtt gctcttttcc atgcccagtc aaccagatt ggggtggagc 480  
 aggaaggagc tcttttctgt tcccaagcct cagaactctt gagctgtggc ttacttgctg 540  
 gcttcatcag gttcaagctn cgtgggccac actgctgctg ngccaagaag gtgt 594

<210> 166  
 <211> 434  
 <212> DNA  
 <213> Homo sapiens

<400> 166  
 gcgtcgcggc cgaggtacta taatgggtccc catcttaatt tgaaagcgtt tgagaatett 60  
 ttaggacaag cactgacgaa ggcactcgaa gactccagct tctgaaaag aagtggcagg 120  
 gacagtggct acggtgacat ctggtgtcct gaacgtggag aatttcttgc tctccaagg 180  
 caccataaga gagaagattc ctttgaaagc ttggactctt tgggctcgag gtcattgaca 240  
 agctgctcct ctgatatcac gttgagaggg gggcgtgaag gttttgaaag tgacacagat 300  
 tcggaattta catttaagat gcaggattat aataaagatg atatgtcgta tcgaaggatt 360  
 tcggctgttg agccaaagac tgcgttacct ttcaatcggt ttttacccea caaaagtaga 420  
 cagccatcct atgt 434

<210> 167  
 <211> 395  
 <212> DNA  
 <213> Homo sapiens

<400> 167  
 acaaagttaa gtttagccct tttctagaaa gtgatcttta aaattaaaaat tgctcctctt 60  
 ttaaattcac caaatttatg tgtgggaagg caccaaaatg attttgtaag tgccactgca 120  
 atattccctt tcaagtgtgg cctaaatttc aatcttaagg atggaatgca tgtctgctcc 180  
 ttgttctgaa aaatataggc atctactaca ttttaaaaca cagtgaacaa tatacataag 240  
 cctataaaaa aagatttgtg caatttgaaa gcctgttaat tttttatgta gacataccta 300  
 cacacgaaag ggtaaattc acagccttac tagttccttg cttccagtat ttcaattggg 360  
 ctccctccct cattattatt attactacta gtacc 395

<210> 168

<211> 683  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(683)  
 <223> n = A,T,C or G

```

<400> 168
ggtagcggtat tctaatacaat gcatttgaaa agtcagcaaa agcccacatt aattcctatt      60
acgcttggttt cttgggttcaa tctcagcaact ttcagcgggt cttgtgcggc gattctgtct      120
tggacttatt tctgtgtcctt gaagatcggt tttatgtgat gcttcccagg cttcctcttc      180
ttctaaaaga tctcttatga tgtctgaact ggaactattg catgaatctg attctgatga      240
agaaagaact tcttgaatat caatacagct agaagaatcc tcttctctgt cagggtccaa      300
ttcctctggg gaggccagct ttgattgaga aaagtgggtt gttactgagg tcatattatc      360
ttcctgtccc atgcatacag aagatagctt ttctgtagat tcatcttctt ttgttattgt      420
tactgttttt tgtgacattc cagcaatttt cttgtatcct tttctagcct gatccaccag      480
aagctgaaa tcaactcttat gttttttacg atatttactg tggatttcat ctatttcctt      540
ttctgnttgg tcctttgtaa aaaccattac actttcattg agtttactag cttcaagacg      600
catcctagtc ttctctatat ttctgatttc tcgaactatt tcagcagctg atttaggatg      660
caaagcatcg cattgggcat tgt                                     683
  
```

<210> 169  
 <211> 408  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(408)  
 <223> n = A,T,C or G

```

<400> 169
ggtagctttc tgaccacaat gaaataaacc tagaaatcaa taacaagagg aactttttaa      60
gcagcacaaa taaatggaaa tttaaataaca tgattctgaa tgaccaatgg gtaatgaaga      120
aattaagaaa caaaatttaa atgtcttaaa atgagtgaaa acagaaacac aacatataaa      180
aatgtatggg atgcagcaag agcagtttta agaggggaagt atttagtaat aaacacctac      240
atcaaaaaca agaaagatct ggctgggcaa ggtgggtcac acctgtaatc ccagtgcctt      300
gggagcccaa ggcaggagga cgacttgatg ctgggtcaag accagcctgg gccatatata      360
tagcaagacc ttatctcta aaaaaaaaaa nanaaaaaaaaa aagcttgt                                     408
  
```

<210> 170  
 <211> 566  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(566)  
 <223> n = A,T,C or G

<400> 170

```

ggtaccaaca cagccaaaga ctgtaagaag gtagctgaag tctcttgcca aataggattg      60
aaaagctaaa atctttctct gtttctttct taagtaacaa ctggtctatt caagctcaac      120
cagagcatat aagagaaaaa actgactaac gaggggggtct taaagagctt tgaaggacag      180
tttctagaaa gtagaaagat cactgagtaa attactgcac ctctcttacc ccacaaaaaa      240
aagggtgagg atgaatgtaa aagtgtagag caagctttca gacaacttca agtttgtttt      300
tggcgcttcc gtttgtaagc aatcaagatg gtgagagacg ctatcccaaa gaagaaagtc      360
tgtaggaacc agagtagctg agcccgacca cttgtgatgc ctttatgctt gcacaatact      420
atggcataca aggactctnc cacatgaatc agccaggcaa gccaatacc attgcaaagg      480
anggtgtgat gggngggcac caagtacctg tccggggcggc cctttaaagg gggaaattcc      540
ccacttgggg gcgggnttta ggggnac

```

```

<210> 171
<211> 562
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(562)
<223> n = A,T,C or G

```

```

<400> 171
ggtacctttg caagcagggtg gccagtaaag ctgaggagaa tctgctcatg gtgctgggga      60
cagacatgag tgatcggaga gctgcagtca tctttgcaga tacacttact cttctgtttg      120
aagggtattg ccgcattgtg gagaccacc agccaatagt ggagacctat tatgggccag      180
ggagactcta taccctgatc aaatatctgc aggtggaatg tgacagacag gtggagaagg      240
tggtagacaa gttcatcaag caaagggact accaccagca gttccggcat gttcagaaca      300
acctgatgag aaattctaca acagaaaaaa tcaaccaag agaactggac cccatcctga      360
ctgaggtcac cctgatgaat gcccgcagtg agctatactt acgcttcctc aagaagagga      420
ttagctctga ttttgaagggt ggggagaattc atggccttag angaagtaaa gccangagcc      480
cccaaagtgc ttggacnaac ttctcaataa ctggcttttg agctgtacct gtcccgggng      540
ggcnctttaa aangnnnaat tn

```

```

<210> 172
<211> 617
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(617)
<223> n = A,T,C or G

```

```

<400> 172
acggtagaac tgctattatt catcctatgt gggtaattga ggagtatgct aagattttgc      60
gtagctgggt ttggtttaat ccacctcaac tgccctgctat gatggataag attgagagag      120
tgaggagaag gcttacgttt agtgagggag agatttggtat tatgattgag atgggggcta      180
gtttttgtca tgtgagaaga agcaggccgg atgtcagagg ggtgccttgg gtaacctctg      240
ggactcagaa gtgaaaaggg gctattccta gtt+tattgc tatagccatt atgattatta      300
atgatgagta ttgattggta gtattggtta tggttcattg tccggagagt atattgttga      360
agaggatagc tattagaagg attatggatg ccgttgcttg cgtgaggaaa tcttgatggc      420
agcttctgtt ggaacgangg tttatTTTTT ggggtanaact gggattaaaa gctacatggg      480
taattctaag gccactcagg ntaaaaaanc nngcgagctt aaccctttga aaaangnggc      540

```

ccccntggcc cgaaacnccc ttaaggggca attccancaa cntggnggcc gttattangg 600  
gateccgactt gggcccn 617

<210> 173  
<211> 232  
<212> DNA  
<213> Homo sapiens

<400> 173  
ggtaccagat gctagctggg cctgggtgggt atccacccag acgagatgat cgtggaggga 60  
gacagggata tcccagagaa ggaaggaaat accctttgcc accaccctca ggaagatata 120  
attggaatta agctttttgta aagcttttccc aaatcccttc atcattctac agttttatgc 180  
tatttgtgga aagattttctt tctcaagtag tagtttttaa taaaactaca gt 232

<210> 174  
<211> 987  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1) ... (987)  
<223> n = A,T,C or G

<400> 174  
gcggccgang tacttcacca tctactgactc catggacttg atcagccgcc gctggatgta 60  
tccagtctca gcagtnttga cagccgtgtc aatgagcccc tcacgacccc ccatggngtg 120  
gaaaaagaac tcagtgggtg tgaggccggc taggtaggag ttctccacaa agccacggct 180  
ctcaggcccc tagtcatect tgatgaagtg aggcactagt ccggtgcttg aagccaaatg 240  
gaatccgctt gccctcgacg ttctgtgtgc caacgacagc gatgacctgg gagatgttaa 300  
tcttgaacc tttagctccg gacacgacca tanacttgaa gttgttgtat tcanacaggg 360  
attnntgagc agaggagcca gtcttgtctc gggcatcggt aagaatgcgg ttcacctgat 420  
tctcaaactg ctgccgcaga gtgttccctg ngngngggctc cagctcattg ttgngngcct 480  
tctcgatgac ctctattacg tcctgcttgn ncttcttaat agtgttctga atgtcctggg 540  
aagncttaga atcagcantg gngtcccaan gcccatactt tgacctatag acagggaata 600  
acatcagcaa acccctttgg acctctaata nacatggaat ggaattataa cccagagta 660  
taancanggg caccanattc aaggaggaaa gaaanggatn gtangacagn aagaagttnn 720  
agaantcnnn nagacggctt ggaccctgnc cggcngggccg ttcaaanggc caattccann 780  
ccactggtgg ccggnacttn tggaaaccgnc ttgganccaa acntggctaa aaanggccnt 840  
agcnggttcc cgggcttaaa tggnatncgn tcccaattcc ncccaaatta cggcccgnaa 900  
nccttaancn aaaancccg ggggcctnan gaanggnnta acncccntta aatgggttng 960  
cncaaggcc cnntttcaan tnggan 987

<210> 175  
<211> 574  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1) ... (574)  
<223> n = A,T,C or G

```

<400> 175
actccccgcc cctctgaaa gcatgtcaca tcatgtaaat ttgcttctaa catctgcttc      60
aaactgtctc tggactccaa atttggatgg gtcagcctct gcagaaagtt tgtgttgaga      120
tgctggaaga acagcagagc ctccctgcacc ctcagcaagg gaccagctcc caaaggaaag      180
gtccttgtgt gacatttgga gaatcttcct tcatccagac aactctactc gaagcaagac      240
gaaagcagga tgtggcagtt gcagtggaga aggaaaggaa agatgggcag actctgcttt      300
ctggaaaattt cttcacaaag tagagctcat gaactctgtg ctgtcttctg gtaacatata      360
atcagtgttt gtattcatgg tgtggcacat ggatccatgg cattgggtaa atctggtggt      420
ttttacacat ggtcagaatg tgttcaaata catctcatga tggagacagt ncccaaggta      480
aatggttggt ttcagcattt taaaaaagac tcccttaaca tttatctcag aatcatgagc      540
ccttcttcta gttgacaatg gcaatgggtcc cccn                                     574

```

```

<210> 176
<211> 570
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1) ... (570)
<223> n = A,T,C or G

```

```

<400> 176
ggtacagata ttcattcagg agctccagga aactggattt gctctctaga gggcagctca      60
aagggcccat tcactcacia tccacccaac ggcattcctg gcctccggtc acagcctcag      120
ccacggaagt cctgcagggt ttgtcagctc gtgggggtga gtgccctaac accatgaact      180
gccactgctt cccagaaaga aagaagaact tggaaataga gactcccag gtctcctgac      240
cctcttcctt cttggaatga gacccaggta gtgctcaggg gatttctggt gttggccatg      300
gacaagcaac cagtagtggg ctcaactttag ggacgcaaac cacaaagccc acctcaggaa      360
gccaaatttc aactcttgcc ctggggcaaa cttctagcaa ccaggccaga ggcaaatgtc      420
agacaggata agggatgaca tnccatcaat caaagttgna aatgggaagg gaccancca      480
gtttgnaata aaggcnttaa actnggnacc tggcccggcc ggccgtttaa aggcgaattc      540
acacactggn gggccgtcta agggatccca                                     570

```

```

<210> 177
<211> 621
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1) ... (621)
<223> n = A,T,C or G

```

```

<400> 177
acagaagagg atgaagaaga ggatgaagag gaagaagaag agtcttttat gacatcaaga      60
gaaatgatcc cagaaaagaaa aaatcaagaa aaagaatctg atgatgcctt aactgtgaat      120
gaagagactt ctgaggaaaa taatcaaatg gaggaatctg atgtgtctca agctgagaaa      180
gatttgctac attctgaagg tagtgaaaac gaaggccctg taagtagtag ttcttctgac      240
tgccgtgaaa cagaagaatt agtaggatcc aattccagta aaactggaga gattctttca      300
gaatcatcca tggaaaatga tgacgaagcc acagaagtca ccgatgaacc aatgggaaca      360
agactaacta tttagaaaca tttaagatgc cagtatttta catacagggt ctggntttta      420
acactggatt aaaacttttt gngttaaata aaaaatggga ccctttagggt ttttaccag      480

```



```

gaagaaagcc aaggtttggg aaaaattaaa aggtanccct tggggccggg gaanccacgg 540
ctttaagggg ccgaaaattt ccaagnacaa ccttggccng ggcccggnta ncttaaaggg 600
ggaatnccca agaccttnng g 621

```

```

<210> 178
<211> 403
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(403)
<223> n = A,T,C or G

```

```

<400> 178
actccttcct gagccgctgc aataagcttt ttgctgtgga atatgacgac agctagatac 60
tgtccctgcc acaagagctt ctgggtataa atagacaaag actctaattt ctaattgacc 120
tcttttcttt ttcaggttta tacataaatt ttcgtcacct ttataaacag cgcagacggc 180
gctatggaca aaaaangaaa aagatccact aaaaagaaaag atttagatgg cttcttgcca 240
gtttgagcct aatctgattc ttacagtttt accttcttga accaatgtaa aagttttttt 300
aatgttaa atgattaaattc tcagtggaggc tatcttcctt ttccccagta acattctctga 360
atttactgnt accttattgt aagtacctcg gtcgtgacca cgc 403

```

```

<210> 179
<211> 650
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(650)
<223> n = A,T,C or G

```

```

<400> 179
cgagggtacaa gctttttttt tttttttttt tttttttttg agccaaccag ctaaaggatc 60
actgcagcta aatacagata gagaagcaac aaagccaggc aaatacccat cagagacagt 120
gacaagagca gctggggggca cggggggaggc agaaggaaga gaaagaaggg gaggagcctc 180
cagagtccca gccccaaccc cctctgccat tggctaccct tgctccccac aaatccctgg 240
ggttgaagtg aggaggacta caggctgggg tgaaaatata caaggacagc ccaacaaaat 300
acaacaagga ctagcatcag tctccccctt actccacccc caagaaaaat acccttattg 360
ngactagtat ttatgaaaat ctgtaagaga ctattctatg tagtggctct aatcccatat 420
cacagcaact gcctgngttg ggaacttttc aaatcagtga tttgcgggaa ccaaccggat 480
tttcagcttn ttacgnggca tgcagcttta ccaaaacttg ggtaaagncc agncacattt 540
accttctgct tacatntaaa aagggtgang aaagagggaa gggaaaaagg ggttaagggc 600
taggtaaact tactggtnag cagctanatt caccatggtc nttttttggg 650

```

```

<210> 180
<211> 639
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature

```

&lt;222&gt; (1)...(639)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 180

acatacggct	gtgcgataca	ccagcattga	attggttga	gagatgagtg	aagtcgttga	60
tcgaaatcct	cagttccttg	accctgtgtt	gggctatctt	atgaaaggcc	tgtgtgaaaa	120
gcccctggct	tctgctgcag	ccaaagccat	tcataacatt	tgctctgtct	gccgagatca	180
catggctcag	cactttaatg	gactcctgga	gattgcccgc	tccctcgatt	ccttcctggt	240
gtctccagaa	gctgctgtgg	gcttgctaaa	agggacagca	cttgctcctag	cccgattacc	300
tttgataaag	attaccgaat	gtcttagtga	actatgttct	gttcagggtta	tggcattgaa	360
aaagctgttg	tctcaagagc	ccagcaatgg	catatcctca	gatccacagt	gttccttagat	420
cgcttgcag	tgatatttag	gcataccaat	cccattgtgg	aaaatggaca	gactcatccg	480
tgtcagaaaag	tcatacagga	aatatgggca	gtttatccga	gactctaaat	aagcaccgag	540
ctgataatcg	gattgtagag	cgtgttcaag	gtgcctgcgc	tttgtggtcc	tgngaagcna	600
angactgaac	actgtgcagc	nctagtccac	aatgngaag			639

&lt;210&gt; 181

&lt;211&gt; 644

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(644)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 181

acaagagagg	ttccaggagg	gggtgatagg	cagaatcttg	gtcccatca	ccttcctgc	60
ccagtgttat	gcctatgaat	gtgttacatt	atgtggtaaa	agggaacttg	cagatgtaac	120
taaaatctct	aaaatagaga	tattatcctg	gattacctgg	gggaaccag	tgtaattaca	180
tgaaccctta	aaaatggaag	aggatgcagg	agtcagattc	aaaggaaggc	ccaagggtgt	240
attgctgact	tgaagataga	ggggccatgt	ggaaatcaag	agaaggaagt	gaatccttcc	300
agtgaagctt	gaagagagca	ccttgaggca	cagatgagaa	gcttggcctt	acctgatgcc	360
ttgatcttag	cctgggtgaga	ccccgagcat	ataaatctgc	tgtgctatgc	cacactcttc	420
acctacagaa	acttagttta	aagccactaa	gtttgtggtg	atttgggtgg	tttaggcccc	480
ttgagggtag	agattttatg	cttgtgttac	aagtagaaga	gcagtggaaa	agttgggctt	540
tggtaatctt	ttcaagggtg	aattgtagtt	ctgggagtc	tatctanctt	gggntcagaa	600
cnttggtggg	cangnccctg	tggggacttc	ctgggttaac	cttg		644

&lt;210&gt; 182

&lt;211&gt; 609

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(609)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 182

ggtacagaaa	agtcagatca	aattggatat	gtagacattg	ctaaggattt	tgaactctaa	60
gggcattgat	aagctactca	agggttttta	gtaggggagt	gacttgatta	gacttattta	120
ttgttgaaaa	agtcgtgtgt	gctgggtgtg	ggaaaataga	atggattgaa	aaggaaactca	180

agtggagcat	caagactcag	ttaaggagtt	aatctaggtt	ggaaataatt	gtagcttagg	240
cctggatgct	ggcaataggg	aaggggatgg	attcatgaaa	gaatgggata	cttgagaaga	300
aatatttctg	tgctggagaa	gtagattggg	gaagttcatg	gcataaacat	tataatggat	360
gctatgggca	tagataacat	aaacatgtag	agaaagtaaa	ggtgacctag	ggcagaagcc	420
ttaggaaccc	aaaattttaag	agtagactga	agagaaccgc	tgtagaagtg	ggaggaaanc	480
tgtcgtgtg	ggtagacaag	gagaccnttc	aaaaggatca	tcattacagt	naaaaagctgg	540
caactcggcg	tcttggtgaa	agtnccctgc	cgcggccgtc	naggcnatca	gccatgcgcc	600
gtcttaggn						609

&lt;210&gt; 183

&lt;211&gt; 401

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 183

ggtactcatc	ctttgccagc	aaagatgcac	aactataact	atggtggtaa	cttacaggaa	60
aatccgagtg	gccccagcct	catgcatgga	cagacctgga	cttctcctgc	ccaaggacct	120
ggatattcac	aaggatacag	gggacatatt	agcacatcaa	ctggcagagg	cagaggcaga	180
gggttaccat	actgagtatc	tgtttttcct	caggcacatc	atttttatct	ggaaagactt	240
ttctagctgc	aattttaaggc	agcaatccaa	gagacttgaa	taataataat	tcaacaacag	300
ctttattttt	atgtggagaa	gggtcttgca	tacaatagtt	taaaaaagac	aaaaaaaaacc	360
tttgcttaaa	ttcatgctgt	tctaaaaaact	agatcgattg	t		401

&lt;210&gt; 184

&lt;211&gt; 423

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 184

ggcggcgcat	ggaggtcagc	ggtggtgctc	gctgcggttt	ggaatcactt	gctaggagtc	60
ttgtctctct	gccacccagg	acatcatggc	agctcacctg	gtaaagcgat	gcacgtgcct	120
cctgagagaa	gctgctcgtc	aggccccctgc	catggctcca	gttgcccgac	tgagacttgc	180
ctgggtagcc	cataagactc	tgacttcctc	agccacctca	ccatttccc	acctcccagg	240
ttccttgatg	gagccggtgg	agaaggaacg	agcatctact	ccctacatag	agaagcaggt	300
ggaccacctc	atcaagaagg	ccacaaggcc	agaggagctc	ctggagctac	ttggtggcag	360
tcacgacttg	gacagcaatc	aagcagcaat	ggtactaccg	gcgctacaaa	gtgaagtcgt	420
acc						423

&lt;210&gt; 185

&lt;211&gt; 669

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(669)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 185

accgcagct	tgccccatc	ctcatattca	tccggcaaa	tggcacagac	atcatactgg	60
tctcccttct	gatagtcatg	tgtaggaatc	tgtttcagtt	gctctttggg	aagtcgattc	120
cgctggagcc	gtttccggtg	ctggatacaa	cgagctatca	ttactgctcc	catggccaaa	180
accagcagtc	ccacaatccc	tgtgaaaagg	atgaggtaat	agcccaaggg	gaaggtattg	240

tctggaacca	gaagcaccgc	agcccccttc	tcgtagacaa	agagggcacg	caggtacaaa	300
gagagaaatt	ttaaagctgg	gtgtcagggg	agacatcata	tgtcggcagg	ttctgtgatg	360
ccccctaagc	ccgtaaaacc	agcaagtttt	tattagtgat	ttccaaaagg	gggaagggag	420
tgtatgaaat	aggggtggtg	gtcacaagag	atcacatgct	tnacaaggta	ataaaaatat	480
cacaaggcaa	aatggaggca	gggttgagaa	cacnggacca	cattgaccaa	gggcgaaatt	540
aaaaattgtg	aagtgaagtt	cnggccacgc	antgncantg	atacatctta	tcaggagaca	600
ggntttgaga	gcngaccanc	agtctggncc	aaaattaata	agtgggaaat	ttcttggcct	660
aataagcccg						669

<210> 186  
 <211> 638  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (638)  
 <223> n = A,T,C or G

<400> 186	
ggtacatgtg	cgttggcatt atggatcgat ttttacaggt tcagccagtt tcccgaaga 60
agcttcaatt	agttgggatt actgctctgc tcttggtctc caagtatgag gagatgtttt 120
ctccaaatat	tgaagacttt gtttacatca cagacaatgc ttataccagt tcccaaattc 180
gagaaatgga	aactctaatt ttgaaagaat tgaaatttga gttgggtcga cccttgccac 240
tacacttctt	aaggcgagca tcaaaagccc ggggaggttg atgttgaaca gcacgcttta 300
gccaaagtatt	tgtggagct gactctcatc gactatgata tgggtgcatt atcatccttc 360
taaggtagca	gcagctgctt cctgctgnct canaaggctc aggacaagga aaatggaaact 420
taaagcagca	gtattacaca ggatnncag agaatgaagt attggaagca tgcagcacat 480
ggccaaaaat	gtggtgaaaag aaatgaaaac ttacctaaat catcgccntc aagaataagt 540
ntgcagcngc	aactcctgaa natcacttga cccttagntg accttaaagc ccgnaaanac 600
cttgccctccc	ccggaaggaa ggcctaggtt cccggggcc 638

<210> 187  
 <211> 628  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (628)  
 <223> n = A,T,C or G

<400> 187	
ggtacataga	aattcattga ggtatataga tactcatctg tctaggcagt tcccaatttt 60
ctgaagaatg	ttttacagca aaatttttcta ttttctttta ttaaatagtg acacgtcaaa 120
caatgtcaca	tccaaaacac tagtttcatc aatttctagc agtaataata gacttgctgt 180
aagtattggt	ttctgatgc atacccttgt catacatatt attaaatgac caatattatg 240
tatgaagtag	acaaaaaaat ttactcaaac ttcatcaca tcctaattgt gataattttt 300
gttttatatt	taattataaa ccaaaataca tttgcathtt taagctaatt tgtctcaaaa 360
ttttgcttta	tatttttgga tcagggttaa gtccctggga tcccctgaat gttattgccc 420
tcttggattg	gtttttact ctgagctata ccgtcaaaag acacataagc ttcaaaagtc 480
aagacaaacc	tcatttgcca taaaaatcaa gatatagat tctgggtccga aactncttga 540
aaaacatttt	aagcatcaat atgactgggt ccatgaactt aagtacttct taatgagtat 600

tctttctgaa gctgaaagaa gattgttt

628

<210> 188  
 <211> 654  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (654)  
 <223> n = A,T,C or G

<400> 188  
 cgagggtacaa ggtggactgt gcatgcctca aagaaaaccc agagtgccct gttctaaaac 60  
 gtagttctga atccatggaa aatatcaata gtggttatga gaccagacgg aaaaaagaat 120  
 aaaaagacaa agatattttca aaagaaaaag atacacaaaa tcagaatatt actttggatt 180  
 gtgaagggaac gaccaacaaa atgaagagcc cagaaactaa acaaagaaag ctttctccac 240  
 tgagactatc agtatcaaat aatcaggaac cagattttat tgatgatata gaagaaaaaa 300  
 ctctattag taatgaagta gaaatggaat cagaggcaca gattgcagaa aggaaaagga 360  
 agatgacaag agaagaaaga aaaatggaag caattttgca aggcttttgc cagacttgaa 420  
 aagagagaga anagaagaga acaagctttg gaaaggatca gcacagccna aactgaagtt 480  
 aaaactgaat gtaaagatcc cagattgcag tgatgctgag ttatttanga acnagccata 540  
 gaagaaaatg ctagcagcca acccctgcca agtaatagac taancgggga aaagttttct 600  
 cgagtaggac tacttggcag caccgtcgga gaccngactg tcacatgggt anan 654

<210> 189  
 <211> 650  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (650)  
 <223> n = A,T,C or G

<400> 189  
 ggtacttttaa gataattgta ttgatctttt ttcagattcc ttgtattttt aataaagtaa 60  
 tcttaaataa aactcagata ggtaagtgt tagaaatttt aaacagctta cattgttagc 120  
 gtaaagttat cttttctttt ttcctaatac gagttcttga ccccttggtt attgagttta 180  
 aaacttcaat tgaaattcaa tagtatttat tttttaaaaa aatcactaaa ctgtgcctaa 240  
 agaacataac tgccatatta atgttttggg ttatatcctc tatagtaata gaaaaacatt 300  
 taatacttgt aatgctgatg tgtaattttg ataccagttg agtagaatgt gatcaatcca 360  
 gtttacaatc tatcatgagt attattaact aaaatctatg tgcttttcaa taggaatcat 420  
 tcttctcttg ctgnaacact tgccttaact tttangaaag nggtcatttt taaactgcac 480  
 tggnaagggt gaaagttang actcttggat ttggngaccg naatctgaag ccgaatantt 540  
 aaagggagaa aaagaaacca ggtctttttg ccaaaggctg ggaacctat tcanctttgg 600  
 gnaagtaatt ggatatncca aggggtggan gacaagtctg aaaatcacng 650

<210> 190  
 <211> 699  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(699)  
 <223> n = A,T,C or G

<400> 190  
 accagctcta atctgtggcg tccagttttc tttctttttt tttttttctt ttttaatgtc 60  
 aaagtgaatg tctgaagttt tgtctttttt tctttgtcct tttccatctg cttcattctg 120  
 tggggataaa atacttgtgt ttaatcagaa caactggaac gcattgagga agggatggac 180  
 caaatcaata aggacatgaa agaagcagaa aagaatttga cggacctagg aaaattctgt 240  
 gggctttgtg tgtgtccctg taacaagtag gtgctgctg cctgcctgaa gctttgattt 300  
 cccaaggccc atctccaagc cttgacaaa cagatcaata cccgcttcaa tgcattcatc tcatagcata 360  
 aagcatgttg catgcagaaa cagatcaata cccgcttcaa tgcattcatc tcatagcata 420  
 gaagatatga accaggaagt tactgggtga tgcanttaaa aaatcaaggc catacctaca 480  
 ggtggaaagc nttcacntgt cagcnaacnt ttaattggat gaaccgggtt caaccatttt 540  
 nccaaaaaag gtgtacctgg ggnnaagggg gtgggcccag tggcccccac gtgggacctn 600  
 ttgaaaatga aaagggtggt tcntttccac tgggcccctt gggccttggt aaccaagncc 660  
 tcttccgcgg gggcaaggca antanccttg gcccggnan 699

<210> 191  
 <211> 378  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(378)  
 <223> n = A,T,C or G

<400> 191  
 acaaagattc cagacagact ttgttttttg gcttataaca atgtgtagat actacacaaa 60  
 gaatgaggat gtaattttca tttacaagca aaatgtgacc aaaatccctt ttcttcttaa 120  
 aattgaaaaa tgaaattctt gagaatacta attagtgcg gccaaatctt agactatttt 180  
 aaattagcca tgggttaaaca taggtgagtt aaacattgtg cctttccaaa attaagggtt 240  
 gcagttagaa acataaacat ttgataaaac ttctcaaaat taattatgag tggcttattc 300  
 atgtcctttg gattccagac acacactana aaaagtaaac gttaaagagg tgatattttg 360  
 gaaagcatcc ctagtacc 378

<210> 192  
 <211> 624  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(624)  
 <223> n = A,T,C or G

<400> 192  
 acagtaaaaa gtaaaacttc ctccatccca ggctgcccag catccctgat gccgactttc 60  
 tgggtgtggc ctagggtccc ccagtgtaat gtagggttg tgagcacaga ctttgggtgc 120  
 agtttgctag gttcgaatcc tgactccctc tttgtagctc tgtgcttcaa ttgaaatact 180  
 gtgcctcagt ttctccttta taaaggcagg gatcatgaga gtgcctgtcc cttgtgagca 240

ctatgaaagt	gtagctgtt	ctttaccaga	ataaatgcat	ttctatatct	tcccatatgc	300
atTTTgttaa	TTTTTaaagt	atttcaaaca	caaagtttga	aacagaaaat	tgtgtaacat	360
taactatgaa	cttaccaccc	agaatttaca	aatgctgaca	ttttgcaata	tttatttcgg	420
atctatTTTT	aaggggggga	accctgcagt	tactgcttaa	tcctctttcc	accccaacct	480
tttattTTTta	cacaaggagc	catagtgggc	atacttaagc	tatttttttc	agtaactnaa	540
tatattttgg	aaganctccc	tcctaggnca	tanaagcttt	gncccttttt	tttacagtgg	600
taaacctttt	ggactaaagg	gcng				624

<210> 193  
 <211> 348  
 <212> DNA  
 <213> Homo sapiens

<400> 193	
actgctactt	ctataaacgg
ctttgtggct	gcgcaaggag
atacttttcc	ttcctgatag
catgggcaaa	cagctggact
aaggaagatc	ctccctcttg
cttccttgcc	ttctacctct
acagccgtaa	gactaggcga
ttcatgcaag	ttcgaagggtg
aagccacatt	tgctgctttg
ttccaaggaa	ggttcagact
cacaattaga	gtgtcccat
gttccacccc	ctttccttcc
tcctcacttc	taccaggact
acctcttgtc	acactgatgg
cagggagagt	tggccctatg
agctgtgttc	agcattcaag
cggtctccag	tgcggcatcc
tttcacc	

<210> 194  
 <211> 627  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(627)  
 <223> n = A,T,C or G

<400> 194	
ggtaccttct	cagccagctg
tcagtgaaaa	ggaacagcag
aaatgcgaga	agtgtgtgag
agaaactgac	cctcctccag
tatctccaga	ctcttctttt
aaaagttcct	ggagcaaagc
tgaatgagca	tgaggatggt
caacaaaatt	agttaagggt
gtggaacaaa	gcatgtgggt
tgtgancccc	ccaagtgt..g
cgggcccnng	aattcccaag
cagcaaagcc	aaatggcaga
ctgctgagca	cactgaagtg
caaaatcagc	agcttctccg
gtagccagca	gacagaaaca
gaatatgtcc	cacctaaagg
atggacatcg	aggatctaaa
gatggtgatg	atgatgaggg
tccaggaaga	acatccaagg
gcaggaagcc	aaaagtcaga
gacccgccgc	caaggcaagg
ggttcntt	
gaagcagtta	gaggaatcag
tcaggatgaa	gaacttgaga
agagaatgaa	atcatcaagc
tcttcctaag	gatacccttc
aaaaccttct	cgtgttaaag
atattgttca	gagcattctg
ggatgacgag	gaatggaagc
gtgttcctgc	aagggctggg
ctgtgggtgt	ggctgggtgct
aaaccttggg	ccctttttaa

<210> 195  
 <211> 405  
 <212> DNA  
 <213> Homo sapiens

<400> 195	
ggtacaattc	cacttatcca
aaatgcatgc	gtaatgtaga
acttcatatg	tgTTTTaaac
tactattcct	ttalaaaagg
ggctaattatt	ttctggcagt
atagtcatga	aagatatgtt
cagatttcag	gtaagcttct
ccttggttcc	tgaaatttga
atttttgcac	

aatgaggttaa	tatatcaggg	gcggggcactc	ataagacagt	ataaatccac	ttgtctaaac	240
ttgcatgagg	ctgtgtgcat	tgtaaaatgc	cataaagagt	tttgggtcag	tgaatatattt	300
gctgaaggaa	taacacttac	atttaactga	gcacttttct	gtaataaata	ccaaagtagg	360
tttttgtagc	tgtaaaactgt	gtacctgccc	gggccggccc	ctcga		405

<210> 196  
 <211> 658  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(658)  
 <223> n = A,T,C or G

gggtgaaagga	gttaaaacgc	ccagtgggtca	ttaagtga	catcttttat	caacctgcaa	60
aagctgcagc	gttctctgcc	aggtcaaagt	ggcatgttta	gaaaataaga	gaagatggct	120
gagtagagct	aatgaataaa	tggttggttc	tttagaaaat	taaacacaca	cagagtgtaa	180
gaggagagga	tacggccctc	cctgaaggat	aaagtccacc	tggacgggtg	cctgccctcg	240
cttctcacat	taactgcccc	ggaatgtcat	gctgattggt	tcccgggaagg	gtgtttggca	300
aggggcagtg	tatggagcta	cgtgtagaag	gagagaaatt	tgtgtgtggc	ttttgtaaat	360
tttgaccgat	tgcagcaatt	aaataagttg	attactgngt	tgattttaa	acttatgaaa	420
gctttcaaga	cnaaaaaata	acctttcacg	ttacccccaa	annaaanan	tnnnnttta	480
nataaaaaaa	acttggancg	gnatgnngt	ttttggaaaa	agtttggatg	ccatttgcn	540
aattcttct	tttnggttn	aaaattgaac	ncagggnatn	ggggggancc	nttttggaaa	600
aancccataa	gcttgggttn	cttgnnnaaa	ctttgnaant	tngccccngg	nttaattn	658

<210> 197  
 <211> 615  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(615)  
 <223> n = A,T,C or G

gggtacagaga	aagaaataaa	agatactgag	aaagaggtgg	atgacctaac	agcagagctg	60
aaaagtcttg	aggacaaagc	agcagaggtc	gtaaagaata	caaagtctgc	agaggaatcc	120
ttaccagaga	tccagaaa	acatcgcaat	ctgcttcaag	aattaaaagt	tattcaagaa	180
aatgaacatg	ctcttcaaaa	agatgcactt	agtattaagt	tgaaacttga	acaaatagat	240
gggtcacattg	ctgaacataa	ttctaaaata	aaatattggc	acaaagagat	ttcaaaaaata	300
tcaactgcac	ctatagaaga	taatcctatt	gaagagattt	cggttctaa	cccagaggat	360
cttgaagcga	tcaagaatcc	agattctata	caaatcaaat	gcacttttgg	aagccnggtg	420
tcatgaaatg	aaaccaacc	ttcgggccat	cgcagagtnt	aaaaaggaag	gaagaattgn	480
atttgcaccg	gtagcagaat	tggccaaaat	acttntgaag	ggaccgggtt	agacccaaaa	540
anaannntan	aaaaaaaaann	nttnacttgc	ccgngngccc	ttnaangggg	attcncccat	600
gggggccttt	tangg					615

<210> 198  
 <211> 557



<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(557)  
<223> n = A,T,C or G

<400> 198  
gggacctgca gttggtattg atcttggcac cacctactct tgtgtgggtg tttccagca 60  
cggaaggagc gagataattg ccaatgatca gggaaaccga accactccaa gctatgtcgc 120  
ctttacggac actgaacggc tgatcgggtga tgccgcaaag aatcaagttg caatgaaccc 180  
caccaacaca gtttttggatg ccaaacgtct gattggacgc agatttgatg atgctgttgt 240  
ccagtctgat atgaaacatt ggccctttat ggtggtgaat gatgctggca ggcccaaggc 300  
ccaagtagaa tacaaggag agaccaaaag ctctatcca gaggagggtg cttctatggt 360  
tctgacaaag atgaaggaaa ttgcagaagc ctaccttggg aagactgtta ccaatgctgt 420  
ggtcacagtg ccagcttact ttaatgactc taacgtcagg ctaccaaaga tgctggaact 480  
attgctggct caatgtacct nggcccgcga cgcgtaagg gcgaattnca cacacttggc 540  
ggngctctan tggatnc 557

<210> 199  
<211> 498  
<212> DNA  
<213> Homo sapiens

<400> 199  
acaatgatgc ttctcacagc ttcaaagaca tgtctgagggc atcctaactg cgaatcagcc 60  
cataaaaaca aagaaggagt atttgaccgt atgaaagtgg cattggataa ggctattgaa 120  
attgtgactg actgtaaacc gaatggagag actgacattt catctatcag tatttttact 180  
ggaattaagg aattcaagat gaattattgaa gctcttcggg agaatcctta ttttcagtc 240  
aaagagaacc tttctgtgac attggaagtc atcttggagc gtatggagga ctttactgat 300  
tctgcctaca ccagccatga gcacagagaa cgcactcttg aactgtcaac tcaggcgaga 360  
atggaactgc agcagttaat ttctgtgtgg attcaagctc aaagcaagaa aacaaaaagc 420  
atcgctgaag aactggaact cagtattttg aaaatcagtc acagtcttaa tgaacttaag 480  
aaagaacttc atagtacc 498

<210> 200  
<211> 615  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(615)  
<223> n = A,T,C or G

<400> 200  
ggtacctctt cttccagcac ccaggccagt attgagatcg attctctcta tgaaggaatc 60  
gacttctata cctccattac ccgtgcccgga tttgaagaac tgaatgctga cctgttccgt 120  
ggcaccctgg acccagtaga gaaagccctt cgagatgcca aactagacaa gtcacagatt 180  
catgatattg tcctgggttg tggttctact cgtatcccca agattcagaa gcttctccaa 240  
gacttcttca atggaaaaga actgaataag agcatcaacc ctgatgaagc tgttgcttat 300  
ggtgcagctg tccaggcagc catcttgtct ggagacaagt ctgagaatgt tcaagaattt 360

gctgctcttt	gggatgtcac	tctcttccc	ttggtattga	aactgctggt	ggagtcatga	420
ctgncctcat	caagccgtaa	taccaccatt	cctaccaagc	agaccacaga	ccttcactac	480
ctatcttgac	aaccagctcg	gtggncttat	tcanggttat	gaagcgaccn	gccttgccaa	540
ggataccacc	tgnttggcaa	gttttaactn	caggcttcct	tctggacccc	aggngttccc	600
aaattgaagt	ccttt					615

<210> 201  
 <211> 256  
 <212> DNA  
 <213> Homo sapiens

<400> 201						
actgcacttt	ataaaaagcat	ggataatatt	aaaggatcac	aaaaggcagc	attagcattc	60
tctatccagg	tattattaaa	tctttttatc	ccatgcccc	ctcaaataa	ggagaattat	120
tatctgataa	gcctgaaacg	acttttttta	ataccataac	ctaaaaagac	acttcttaca	180
ggtgtatgca	actttggtca	gcagaaacac	aatacgagcc	tctgggctag	ctaaggcact	240
ctattctgaa	agtacc					256

<210> 202  
 <211> 584  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(584)  
 <223> n = A,T,C or G

<400> 202						
acttttcaat	ctgatccatt	atcttctcga	ctctttctgg	aggcactttc	ccacgagttt	60
gcatectttc	ggccacattg	tggtagaaat	cctgagcaca	ctctgactgt	tcttcaatgc	120
ttagatecct	tttgtaatgc	attccttcca	aaaacagctt	ggtctgttta	tagattttctt	180
ggcctgtctt	gtggaaggct	ttgagaaatt	ctatgaactc	cttagacact	ctatccgttt	240
caatgctggt	ttgccgggtt	atggaaggac	tgggagcttt	tgcttcctga	atttccttct	300
ttgatccgac	cctggaagaa	tgcactgaag	aaattcttca	ctgggggaac	cctgccgggtc	360
ttcttgntgg	gtttcttttc	ttcaaacttg	gaaaatgtna	aggattgggc	ccctgggtgg	420
gttnactggt	ngcaaaggct	ttttttcttc	cctgaggcnt	tccgcagtcc	annctctgaa	480
ttgntttgcc	tggttgngg	acctggccga	cacctanggg	aaatccacca	ctggggggccg	540
tctaagganc	cncttgggcc	aacttggggg	anntnggtan	nntt		584

<210> 203  
 <211> 608  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(608)  
 <223> n = A,T,C or G

<400> 203						
ggtactctta	tacacacctg	ttttctccaa	tgttctcctt	tagtatggct	ggtaattggt	60
ttggtgattg	ccacccctc	gagatgcctt	gccataagtg	ctctgttggc	ctattttgaa	120

aacacagaat	tctcatttag	ttttctacaa	aactttcttt	acaaacacaa	actattaaat	180
ctacaaatct	ttgcatgcta	aataaaaagt	attaagatat	tttagcacc	attagatgct	240
actcataaat	catacatcct	agttcattta	taaccaccag	tctatgttag	tataatcatc	300
ctatgattgt	aacatgcctn	aaacacttaa	ctccgaacac	tttaatggaa	agcccataca	360
cacaatttca	gaacaggatt	gtatgttaac	aatgaatttt	aataccactg	ctttataaaa	420
ttaagttaaa	tattctttacc	actgnaatct	gcatatcctg	nccatatcat	aggtcccata	480
ggtataccca	ggataaacat	attcggcata	gcactatggg	ttgaacacct	ggcccgcccg	540
gccggtncaa	aaggcgaatt	cancnactgg	nggccggtn	natggatcca	ncntcgnacc	600
aacttttg						608

<210> 204  
 <211> 621  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (621)  
 <223> n = A,T,C or G

<400> 204						
ggtacctgaa	gatcttgatt	tgctacacga	gctttctcta	gggcattata	gtaagaaact	60
gcttctttct	ctcgtctctc	tttttctct	ttaagccggg	ctacctggcg	cattagggtta	120
gtaataagaa	gttctagctg	ttcttgtctg	tattgtagtt	cattcacttc	ttctttgagg	180
gtggctttca	tactctccat	ttctgtcagc	tcaatttgaa	gagccagcat	ctctgaagac	240
atgctttctc	gcacacgttc	agacattacg	cgcagttcct	ctgattttaca	agagaggagt	300
tccttctgat	gatctacttg	gtgcttcagc	tgcttttcac	taagcctggc	ttcatcta	360
tccactttca	gtttttctat	cttaagtttt	taagttcatt	cacttcctgc	catggcttct	420
gcttagttgt	cttcnatttt	cttcagggtgc	attttttggg	ggtgggtta	agcttcacat	480
tcgcaagctc	aaactttcta	acattcgact	cttgagttca	acttctcttt	tgaangggat	540
atttctntgg	tcataactct	tangcatngg	gcataattct	taccacatta	tccaatggat	600
ccggaattca	ntttgcctn	t				621

<210> 205  
 <211> 607  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (607)  
 <223> n = A,T,C or G

<400> 205						
ggtaccacct	atcataggta	ttaccacaca	atttcatgca	tggtggcata	ttttaactgg	60
ccttggttcc	tatcttcaca	tccttttcag	tttgatata	agaacacttt	acctgagata	120
taggccaaaa	gtgaagtttc	tctttggaat	ctggccagtg	atcctgtttg	agcctctcag	180
gaagcattga	tgaatcattc	caccaagaaa	acaaacaagc	acctaccata	gacctggcag	240
aataaataag	gaaatcctta	aagatctaca	agttcaaata	tgctcatgacc	atcacagcag	300
aggagtgact	ttctgactaa	tgctgccacc	cacacagaga	ataaggagta	gggcctgctg	360
ggtgttttagc	tcatggcttt	ttcttatttg	ccccctcctc	tttcacgctc	cagtttataa	420
aagaaacaga	gatgatgtgt	gtgtatgcct	caaaatgcag	aaacagggtg	gcttttctta	480
acanggtnac	agtttgtgct	gggtataaga	aaataaccct	ctttcttttn	gccaaagggtg	540

catgtgaatt atcccttctt aanattggtt aaataagcan tnncttanag cccccaaanc 600  
nctntnn 607

<210> 206  
<211> 572  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1) ... (572)  
<223> n = A,T,C or G

<400> 206  
acgcgtgacg tcaactcacat agcaggaaga ctcacaacct ccatccagaa gcaccatttc 60  
cccattccttg atgagttgat tatttttcac atagtgc aaa gtgtttgacc gattaccacc 120  
agccaccaca ggtggatagg ctaaaatgtc tgcgccacga gcccggcatt caaattcaaa 180  
cttagcataa agaaaggctt ctccacagg ggctttactg gtgaacatgg tttctatgaa 240  
agcctgtgat gtcagcttcc cagcaatctg cattcgttca atttctgcag gagacttgat 300  
cagccggagg cgctgtatca gctgctgaac acccgaacc ttgttcttgc tcttggttt 360  
ggcctcagtc aggggctgca tatagtcaga gtgaagctgt gcatgtgagg gccttatcca 420  
ggtcatacca aaccatgttc gtctcagctt tcattttttg gtagaagatg ttgaaattct 480  
tctagcgtat aggttcctgc tactccagtt agagctattg gttccatcag tgccagantc 540  
gnnggaccatt ccaaaagggt tnnactnggg ag 572

<210> 207  
<211> 616  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1) ... (616)  
<223> n = A,T,C or G

<400> 207  
ggtacctgtc ccattcctaa aaggatttgt gggtaatgct ggcaacttggg gccaggaga 60  
atcttctgac ccaactctcc ctctcttca gtcctgaaga cccaagaac ccagttagga 120  
tcccctggcc agaggtctct gtgactgcct ctggactcag cacgtgcagc agcttgggag 180  
gatttgagcc agtctcaaaa acttttagcc ccagaatgag accagtgacc ccaagcagga 240  
gggctgggat ctggaggga gagagggggt ccaaggggac cctgtggctg agggcatgga 300  
gaaccagtgc cagggcccaa gagaccatt tttccagtta tcagaggtga ctgacatctt 360  
ctgccactgc cttgagttca gaaatttaaa aaagcttgca gcaagaaaat gccagtgtgc 420  
aactgggtga ctaaagacca aagaaaaaca gttaaaagg acagcttact tgctctctgt 480  
ctcangttta acttctcacc tgaaatctct nataccctaa ttaacacaa caaagtctct 540  
ttcatagata ggctactttt aagtttnact gcttctgtgg tgggctttgg gggctttgga 600  
agtgggaatt ttttgg 616

<210> 208  
<211> 614  
<212> DNA  
<213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(614)  
 <223> n = A,T,C or G

<400> 208  
 acacaacgtc atgagggttat tcgaaccaca gcgtcttcag aactttcaga gaaaccagct 60  
 gagtctgtca cttctaaaaa gacaggaccc cttagtgtcc agccctctgt tgaaaaagag 120  
 aacttggtcaa tagaaagtca atcgaaaact cagaaaaaag ggaagatgtc tcatgacaaa 180  
 aggaagaaat caagaagtaa agccataggtc tcagatactt ctgacattgt gcacatttgg 240  
 tgtccagaag gaatgaaaac cagtgcacatc aaggagttga atattgtttt gcctgaattt 300  
 gagaaaaccc acctagagca tcaacaaaga atagaatcta aagtttgtaa ggcagccatc 360  
 gccacatttt atgttaaatgt taaagaacaa ttcatacaaa tgcttaaaaga aagccagatg 420  
 ttgacaaatc tgaaggaggaa gaatgctaag atgatttcag atatcgaaaa gaaaaggcag 480  
 cgtatgattg aatgccagga tgaactgtct cggntagagc cacagctgaa acaactncca 540  
 acaaaatatg atgaacttaa agagagaaag tctttccttt ggaaagcaca tattttcttat 600  
 ctaatttaaa canc 614

<210> 209  
 <211> 610  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(610)  
 <223> n = A,T,C or G

<400> 209  
 aactgtttt gatggaagag gacattgttg acacgaagta actggagatg gccttcagaa 60  
 tcagctgagc tgctgtctgc tttggaaaac cgttcctgcc gctgccgatg gatggaaatg 120  
 caatggattt cagcttctta tcatcagcca gggccaagca gtttttctact gtcttttcca 180  
 gaagtcttct acacttgtct gcaccccaaa ctggactatt acagtggatc acaaaacttg 240  
 caggcaggcc atggcctgcg ctgacagcag ctccagctac ttccaagggc ccgttctttt 300  
 tccggagtct caggacagct tccacaaact ccttgccacc tttcttctcc agcgtgtttc 360  
 ctaggtcatc ttttaaggta atgtcagcat tggtaggatt gattatggcc tncacctcaa 420  
 aagcccggtc aaatactgat ttcactgnga ataanggtca acttttgggc canggaaaag 480  
 ctcttttggt gaaaaggact gtgaaaaccn tnggcaagng ggccctcggg tgggctttnn 540  
 gggcttgntg gcnttaaggg antnancngn gttttnggaa ttccggnccc tttttggccc 600  
 cnggttttta 610

<210> 210  
 <211> 589  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(589)  
 <223> n = A,T,C or G

<400> 210  
 ggtacccagc tctaattact ggccgtagca gcatattgct taagaatttt gtagaactta 60

tttctcatca	gcagctgtcc	aaaggactga	taaatagaga	cagatcccag	tccctggatac	120
tttctgtaaa	tcctaatacgg	agactcactt	ctcagcaatg	gaggctgaaa	gtcttagtga	180
gactcagtaa	attccttcag	gccttggcag	atggatccag	taggttgaga	gaaagtgaag	240
gacttcagga	acagaaagaa	aatccccatg	ccactagcaa	ctccattttt	atcaactgga	300
aggaacatgc	caacgaccag	caacacatcc	aggtttatga	aaatgggggt	tcacagccaa	360
atgtcagttc	acagttcagg	ctacgggtatc	tggttggagg	actgagtggg	gtggatgaag	420
gcctgncatc	tactgaaacc	tgaaaggatt	attgngataa	taattccttg	ntnaatgaat	480
gctggttgaa	ctgtacctgg	ccggccggcc	cttaaaggnc	aattcngcca	cttggggggcc	540
gactaaggga	nccncttggg	ccancntggg	gnaacanggc	aannttgtn		589

<210> 211  
 <211> 590  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (590)  
 <223> n = A,T,C or G

<400> 211						
acgaactgta	gcacagcta	caactgccat	tgaaattcgt	aggcaatcca	gtagttatga	60
tgattcctgg	aaaataacag	atgaacaaag	acagtattat	gtaaatcagt	ttaaaaccat	120
tcagcctgat	ctaaacggat	ttattccagg	atctgcagct	aaagagtttt	ttacaaaatc	180
aaaacttcct	attcttgaac	tttctcatat	ttgggaactc	tcagactttg	ataaagatgg	240
tgcattgaca	ctggatgagt	tttgtgctgc	ttttcatctg	gtggttgcta	ggaagaatgg	300
ctatgattta	ccagaaaaac	ttcctgaaag	cttaatgccc	aaactgattg	atttgggaaga	360
ttcagcagat	gttggggatc	agccagggtga	ggtagggttat	tcaggctctt	ctgctgaact	420
cctncaagca	agteccatcg	atgccattac	ttaacccgac	ttggnetgac	tgaatcaaac	480
cntgaccatg	ggaaacatta	nngacgcttt	ttaagctaca	aantttggnc	ccattgggtt	540
taaatttggc	ccnattgnac	cggaaccgga	ntgggnattc	cgnnccattn		590

<210> 212  
 <211> 614  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (614)  
 <223> n = A,T,C or G

<400> 212						
ggtacattcc	attactaaat	gccacataac	tgtttggata	acataagaag	agtgggtcat	60
tatatgatac	caattagaag	atattagggg	tggtggaggc	agtaatttct	gggataagaa	120
ctataattta	cagaataaac	agacatcatc	tgatctggtg	aaacctgtgc	attcccacaa	180
ttaggctttt	tcacactttc	tctctttaaa	tgtgcaacac	cttccccatc	ccctctttac	240
ttgtagcaag	ttgattttgc	ttcttatatc	ccgagaaagc	aactaccacc	aaatctacca	300
gtcaactcat	ctatatattga	acttaaagat	ctttatgtta	gaatggaatc	tatccatggt	360
ccagcttagg	cgaagccctt	ctgaagatat	ccattccttc	cttcctcatc	aaattttcct	420
tcttgactag	gattaaaaaa	attcaaccag	taggcataat	ccgaaccttt	ggnetcataa	480
tgaaaaggat	agttaataag	gtcatcaat	tgggcccnaa	ttttgnnttg	ggtcaagngt	540
tggccaaagc	nncnnaaang	gccccanttt	tgggtaaaaa	tttttnaggg	gttaaaaancc	600

anggggntnc annn

614

<210> 213  
 <211> 624  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(624)  
 <223> n = A,T,C or G

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<400> 213
ggtacctctc ttgtcatcaa attttgccca gttattttaat gttggattcc tcaagggtca      60
gtcagcacct tttaagccac tctaaactcc cactaatgga taagctcatt tacttccaag      120
gcttcaatgg tcacaatata acactgctgg ctctccaact tatttttcta taaaataaaa      180
aataataaag gaacaacgta tttttctatt caagactttt tatctgagct tcagatacat      240
atatccaatt gcttacttga catctccact tagaggccag aggcatTTaa actcaatacg      300
tcttaattca atctcatgat cttccctctg aaatctaate tctactctt ccctatctta      360
atgaaagaca acaccatccg tccctttaca ttaag: _ctt cagcttatcc ctacatctat      420
ctcatcacta aagaacaggt attttcaccc ttttgagrat cattcaaatt cnttctactt      480
cttttccatt cntactggta cccccctang ggnaagntat taactttttc ctacctacng      540
ncccttttgn ancccttcca tcaantnttc cnaattgnga nggtnaattt ttnnaacccc      600
aanntggnga tacnnngtgg gnng

```

<210> 214  
 <211> 612  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(612)  
 <223> n = A,T,C or G

```

<400> 214
ggtacaagtc tgtaataacc ctatgtggtt tcattaggat aactttttac ctatccttga      60
ggatcatccat attcttacag gccttccagt caataatgga agagctcact ctatacaaaa      120
ccaatatgca aggcattgtg ttgtccaagc aattggatgt gtgcagtagc caatttcatt      180
tactgcatta ctctttggcc tgggaacccct gtggtctgca ctacatgtga atggccttcc      240
acttcagtct taggcagatt tgacctttta ggggcagcaa tgctgaagga cacagcaatt      300
taaattataa tgtgtcaggc tgtgttttca cttcaaacad gtatgagtag tcagctgtaa      360
ttagagaaat gatgacttcc taagagttca gccacgcata attctagatt tcaagagcat      420
ctaagacttg tggattacct catggcatga gagtttcaga ctacagccntn tgagccagtc      480
nagggaaagt ggagcttgca acgcaaatga aaacctggct ttggggccaa nggacttggc      540
tttaaatggg ccccttngg cctgggnttt cctcttttgg cnaaantttt ngtnnccaan      600
gaaagtaatn ag

```

<210> 215  
 <211> 618  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(618)  
 <223> n = A,T,C or G

<400> 215  
 ggtactcggg aggctgatgc agcagaattg cttgaaccca agaggcggag gttgcagtga 60  
 gctgagaacg tgccattgca ctccagcctg ggcaagagag cgagactcca tctcaaaaaa 120  
 aaggtgagaa agataggtgt gaacatgagg tggcaggtgt gaagatagga aaggcaggct 180  
 caccctgat gacatgcagt tagagagacg ggggcttccc ttctactttg gagagtaaag 240  
 agaaggctct gaggtatcaa cagcctgggc tgttgggaaa aggacaaaga atctgtgttt 300  
 cctgaacgcc aagaggaagt ctctttggtt gctgtgggct aactgggtct ctccagttcc 360  
 aagaggtcat ccacatattc cacaacttct ccctcatcat catccattat attttcctta 420  
 nccaaagtca tacaagcttc ntctggagtg gtggnccat ttaagaactg aactgnttta 480  
 agnctgggct ggaantgctc attcnaagg ccccantggg cctnngggan ctngccngcc 540  
 ggcccnttaa aggcgaattc cancanntgg gggccgggtt tangggancc aacttgggnc 600  
 caacttggng aaatatgg 618

<210> 216  
 <211> 595  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(595)  
 <223> n = A,T,C or G

<400> 216  
 ggtactccca ttcagggtga cgaagtgggc agaactggga gccatcttgc ccagcccctt 60  
 ggtgctatgt ttaccttgaa gcaatccttc ggccttagga ttggcctcta gtagttcatt 120  
 aactgacct agagctacct ctgataagag cagcagtcct gtattcttta ggcgagaggc 180  
 aaagcagtaa ttggcactct tggagacat gtcagcaaag tagattcctt tcccaaact 240  
 gtaacctgtg atgggagctt caggtggggc aattcgaag ccatgggtca agattcccac 300  
 ccagttactc atcctggaac catgccatag aagcatcctg ttatgaaggc cctctctgaa 360  
 ggcttctttc tcaccatcct tctcacttca aacaaatcca gcaagggtcat ggtataagtc 420  
 gctgtgtgtg ggaancatgg gtagaatgga aggtacctgg cccggccggc cnttcaaaag 480  
 ggccaaattc cagcacaatt ggnnggccgt tactaaggga tnccaaactt gggncccaaa 540  
 cnttggngga atcatgggcc naaactngtt ccctggnggn aaattgnaan cccnn 595

<210> 217  
 <211> 610  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(610)  
 <223> n = A,T,C or G

<400> 217  
 actgaaaact ttttttaaaa aaggtgatga tgaagtgcac tctgtagcag cagcgcagct 60  
 atgctttaa ccacacaaaa ggctgtgtcc aggtgcagcc tccttcaccc ttcttgccca 120



cggtgaggat	tgaataacca	ggacttgggg	atattgtttg	ttgtcagggt	tattctgtgt	180
ggtaaggaat	atttgtttca	catttataca	ttttcttttt	ccactcacgt	aagtttctat	240
cttgagagca	tagtccaaag	tgcaaaactt	gggtgtttaca	aggaaaattg	tcttccagaa	300
ctccactgtc	atcactttca	ccaaagtggg	agtttgcattg	aatatgctca	gaatctaata	360
ttcaatgttc	tgttacattg	taagtgaagt	ccagctcaaa	atagatttaa	tatattgaat	420
ttatttgnac	cntnggccgg	gaacacgcct	aagggcgaaa	ttncagcacc	actggccggg	480
cggttcctaa	ngggattccc	aaactntggg	nnccanactt	nggcgnnaan	cnatngggcc	540
taaaacttgg	tttcccctng	nngaaaattg	ggttatnccg	gttacaaaatt	tccncncaa	600
atttccgggg						610

<210> 218  
 <211> 585  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(585)  
 <223> n = A,T,C or G

<400> 218						
ggtacaattt	gtaaatattt	caaaggtcta	ggagtcataa	ctttttgttt	tcatactgaa	60
aatgatgttg	atcagagaaa	ccaactgttt	tgcttttcat	tgctctgtga	gaaatttgag	120
gattctgttt	tgctgttagg	taagctaaac	tcagaaattg	aaaaggaaaa	gactggataa	180
acacaggatt	ttcagtaaga	aaacaacccc	agtcttgtct	tagaagccac	ttgttgagga	240
gtctgttggg	ggaaaaaaga	ggatatgctt	ttaaaggtag	aacaaacctt	cttctgtgtt	300
aaatcaaaaag	gatgttcaaa	atccaccagg	acagatgcta	cttgggttta	aatggagcca	360
tagatgatac	aaagtcctct	tggggctgaa	aatcacttcc	tatttgcattg	gctttactaa	420
ctggtttctg	ttttccatta	tctttttcac	agaaagtntt	tggccaagat	ttttccagc	480
ctttnaaatt	gaaaccgggc	agtantttga	cccctgnttg	gntatttntt	ccagnaattn	540
aaattgnatt	cnctggntcc	aaaggcntta	attccccctc	cttng		585

<210> 219  
 <211> 599  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(599)  
 <223> n = A,T,C or G

<400> 219						
acaggtcaca	gatactacaa	tectactgtg	gcttgtgtct	ctttttccga	ggcacatcct	60
caaccttgga	aaaataaact	tttaaattga	ttgagacttg	cctcagtgat	tttctttggg	120
gtatactctg	tatcacttga	atactttcca	agtgaagaca	tgctttataa	tccagagtat	180
ggactgtttt	ggccagatgt	tttctatata	ctggaaagaa	atgtgtattc	tgctgttgtt	240
gaatggcatg	ttctataaat	ctcaattaca	tcaagttggg	tgatagtctt	gatgtcttct	300
atatctctgt	ggattttcca	tttgttctag	tgattattga	gagaaaggta	ttgatataat	360
tgccataaat	tctggattta	tctacttctc	tttgagattt	tctccatttt	tgcttcatgt	420
atthttggaag	cccctacttc	acccagcatn	ggnttttctt	gagccccttc	caagaagtaa	480
ttttaaccac	ccangnccca	tccaaccctt	aaccccaang	gnnaaccaac	cgnnngcgang	540
tnanttgggc	ctaaccnngg	gaaccatttg	ggggnccctn	ggnattaggg	ganaccnng	599

<210> 220  
 <211> 602  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(602)  
 <223> n = A,T,C or G

<400> 220  
 ggtacccatt taatataact atgatgcact taaattgaag ctatgccaca ggatagaaaa 60  
 tgaattacaa cttaaataca tgttggaagt gtaacactgt ttttcaagggt ttaaaaaaat 120  
 tcctaatagtc ttttagcctt ctttaatat tttaggtaag gaaagtatgt ttggattttt 180  
 tcctctttgt aggtatatga gattgaaatg tgaagtattt ggacaacaaa cgtcaagcaa 240  
 tgggaagcca ttttgatttc ttgagtaatc ttgtaagcat taagtgaatg acaaagtagt 300  
 agtgtaactt atttcttatg gtataacttc agtcaattaa tataaggata gtttttgttg 360  
 tatgtacact aagtggtaat ataatngcca ttgaantata ctaatcttct tcttaanaga 420  
 ctattcnnet nttaattgnt tcctaattggg aacantntng gcctaaccen gaaaaagggg 480  
 ganaaaggat tncctgccc nggccgggcn tttccaaagg ggcanatttn cgnnacacct 540  
 ggnngcccgt tntctanngg aatccnannn tgggcccaan anttgggggg aatcttnggc 600  
 nn 602

<210> 221  
 <211> 573  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(573)  
 <223> n = A,T,C or G

<400> 221  
 acctaatagaa aagatctcca agaggtttgt ctcatctctc ttgggctgta aaaaagatta 60  
 atcctatatg taatgatcat tatcgaagtg tgtatcaaaa gagactaatg gatgaagcta 120  
 agattttgaa aagccttcat catccaaaca ttgttggtta tcgtactttt actgaagcca 180  
 atgatggcag tctgtgtctt gctatggaat atggagggtga aaagtctcta aatgacttaa 240  
 tagaagaacg atataaagcc agccaagatc cttttccagc agccataatt ttaaaagttg 300  
 ctttgaatat ggcaagaggg ttaaagtatc tgcaccaaga aaagaaactg cttcatggag 360  
 acataaagtc ttcaaagtgt gtaattaaag gcgattttga aacaattaaa atctgtgatg 420  
 tanggagtct ctctaccact ggatgaaaat atgactggga ctgcccttga ggcttggtac 480  
 cnttggcncc aanccttgg gaaccccaaa aactntggaa gagaannggg gttttcctgn 540  
 caggcaacat attgcctttg gcctnctttg ggg 573

<210> 222  
 <211> 168  
 <212> DNA  
 <213> Homo sapiens

<400> 222  
 ccaccatctt ggaacgggag gcggagcaga gtcgactggg agcgaccgag cgggccgccg 60

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ccgccgccat gaaccccgaa tatgactacc tgtttaagct gcttttgatt ggcgactcag 120
gcgtgggcaa gtcattgctg ctctcgcggt ttgctgatga cacgtacc 168

```

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<210> 223
<211> 564
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(564)
<223> n = A,T,C or G

```

```

<400> 223
actgcagaca aaatctgctt ttagaggcaa gcggtattct gacaaagtaa ctgacccctt 60
ggatggcata aattcacttt ggggactagc cttattcttc ctctgaggtc cttcgctctt 120
caatttattc aattcatcaa tcaaaagtgt tctcttccca gttgcaatta gaagaagtct 180
ttctgcttca gcttcttcta ggggcccctt tccatgttct tcatcaacac agcagttaag 240
agcctggcta gcttgataga tcaactgtctg ttgcatattt atttcgttat tgagttcctg 300
cattttctgt ttgatattaa cttgacaagg aaaggcatta tttttttcat ccagttttga 360
agtaacatct tccttccgaa caatcacctg ctttattgat ggacgttctg tttctttgaa 420
tctttgagat ctatatgcat caatgctgta aagaagatca cgatcttcag aaccaaggct 480
atcacnagat tcaggctcgag ggacacgaag ttctttngaa tttcctgggt ttggactttc 540
atcacttctg ctggngcttt caan 564

```

```

<210> 224
<211> 277
<212> DNA
<213> Homo sapiens

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```

<400> 224
acaaggctgg cgttggttgg gggacggttg agccttggga gggagggtca gggctcggac 60
aggagccgcg gccgccagat gggaaagaac acgtgggagc agtaatgtca agtgacactt 120
aaacccttag acgccgattc gttataacgc gaggaatctt aatcccacgt ccctaacggt 180
cttcggaagc gaagcagtgat caacagtcctc tggtaaacac aagtagtatt acaagtcggg 240
agctcttcaa gtcttggtat agactgtaga gcggacc 277

```

```

<210> 225
<211> 589
<212> DNA
<213> Homo sapiens

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```

<220>
<221> misc_feature
<222> (1)...(589)
<223> n = A,T,C or G

```

```

<400> 225
ggtacctgga ggctcaacgg cagaagcttc accacaaaag cgaaatgggc acaccacagg 60
gagaaaaactg gttgtcctgg atgtttgaaa agttggtcgt tgatcatggtg tggtacttca 120
tcctatctat catctaactc atggcacaaa gttatcccaa acgaatccag cagcgggtga 180
actcagagga gaaaactaaa taagtagaga aagttttaaa ctgcagaaat tggagtggtat 240
gggttctgcc ttaaattggyg aggactccaa gccgggaagg aaaattccct tttccaacct 300

```

gtatcaattt	ttacaacttt	tttctgaaa	gcagtttagt	ccatactttg	cactgacata	360
ctttttcctt	ctgtgctaag	gtaaggatc	caccctcgat	gcaatccacc	ttgggttttc	420
ttanggtgga	atgtgatggt	cagcaacaaa	cttgcaacaa	gactgggcct	ttgggttgga	480
cttttnaaaa	ggccncnttg	atccccattg	agnaattncn	cccggcccaa	aaaaaggtcc	540
taangttggt	aaaatttgca	agctttttta	ggtttgccca	aagnatgnt		589

<210> 226  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(636)  
 <223> n = A,T,C or G

<400> 226						
ggtcaagaag	catgccacct	ccacaactcc	tacctggacc	tccagcgag	gtatgggaga	60
ccctcgatgt	gcagagcctt	cccctgggag	aaggagctga	aagacaaaca	cccagcttg	120
ttccaggcat	tgctggagat	ggatctgctg	accgtgccaa	ggaacaaaa	tgaatctgta	180
tcagaaatcg	gtgggaagat	atttgagaag	gctgtaaaga	gactctctag	cattgatggt	240
cttcacaaa	ttagctctat	cgtccccctt	ctgacggatt	ccagctgctg	tgataccat	300
aaagcatcct	actaccttgc	agtcttttat	gagactggat	taaatgttcc	tcgggatcag	360
ctgcaggggc	atgttgnata	agtttggttg	gaggccnngg	ggagtgagaa	gctgcttcaa	420
tgaatcttgg	gtataaacac	taccaaggta	ttgacaacta	ccccctggac	ttgggaactg	480
ncgtatgcct	actacagcaa	ccntggccnc	caagaaaacc	cttggaccag	cacacacttg	540
gaaggngaag	caggcctttt	gttgaaacca	tttgacttaa	aggattgttg	gaaatcttca	600
nggnaccttg	cccggcgggc	cctttnaaaa	ggggna			636

<210> 227  
 <211> 451  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(451)  
 <223> n = A,T,C or G

<400> 227						
acccaaaaac	caccccaaac	gcccccaaac	cctcaggcgt	gcctgtgagt	gtgtctgtgt	60
gtctcactct	gactcaccca	gacaactgac	ttcagcagcc	aaccttggtc	attcccagaa	120
ccaccactgg	ggggcatagc	tgtggctaga	ctgggggcgc	ccgaatatct	gtctctacaa	180
aaagtaaaaa	aaaaattaat	ggggtgtggt	gggtgtgctg	gcctgtggta	tcagctgctt	240
gggacgctgg	ggcangagga	tcacttgagc	ccgagaattc	aaggctacag	tgagttaaga	300
ttacgccact	gcactccatc	ctgggtgaca	gagcaagacc	ttgtctcaag	aaaaaatttt	360
taaatgagta	aaattcaaaa	aaaanaanaa	aaanaaaagc	ttgacacctg	aaacatgggt	420
tactgcatat	ggnacctngg	cngagacacg	c			451

<210> 228  
 <211> 408  
 <212> DNA  
 <213> Homo sapiens

<400> 228  
 ggtcccttat atggcagaat cttgcaggca gcatgtcgag tttgatatgc tgggtgaagaa 60  
 tagaacccaa ggaatcattc ctttggtccc catatctaaa tcattgtgga cttgtctcagt 120  
 agaatcttcc atggaatatt gtagaataat gtatgatata tttcctttca aaaagctggt 180  
 gaattttatt gtgagtgcact ctggagcaca tgtttttaaat tcttggactc aagaagacca 240  
 aaatttacag gggctaattg cagcattagc cgctgttggg cctcctaata ctcgggcaga 300  
 tccagagtgc tgcagtattc tgcattggcct tgttgcacag tggaaactct ctgcaaaatt 360  
 actgaatacc aacatgaggg tcgtacctgc cccggggccgg ccgctcga 408

<210> 229  
 <211> 270  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (270)  
 <223> n = A,T,C or G

<400> 229  
 ggtacacagc agcatcaaaa aggctattta caagagattt tcttcaacag aatccacttg 60  
 aaagcactga gaatttgcac cttagctaag agcagtttac caaggaacag ggccatctaa 120  
 gtgcctaact agcatttaaa gttgtcaagg ggtggggatg tgcaaattaa gcagcaaaag 180  
 attattatct tgttntgctt taaggggaaag taatantggt cagagggggcc agttccaagg 240  
 gctgggtccaa gggggggccgc tgggtcttggg 270

<210> 230  
 <211> 425  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (425)  
 <223> n = A,T,C or G

<400> 230  
 ggtacattat ccaatttcag ggaaaaaaa tacagttttc ttaccaaatt atccagtgtgta 60  
 tatgactggg tagaatttta agttttgatt tttactgaaa ttcagagtat gaaatgcaaa 120  
 cattcaggat aaaatgaatt cataattaca cacagttata tcaacttgca acaaagcagc 180  
 aaatatgagg gcctaacaca catctcgact ccccccttcc cttctgatcc ctcaaaaaaa 240  
 agtgcaaaat caaagagtca ctgcttgggc caaaaaataa aatacattgt gtataaacat 300  
 ttgaaatctg atggaatcca gcttctattc cacagggtgt cttcagtaag aatcaacgtc 360  
 cgaagatgga actcagttcc agaagaatta attctacaat ctgattctgg tcctgccggg 420  
 cggnc 425

<210> 231  
 <211> 639  
 <212> DNA  
 <213> Homo sapiens

<220>

<221> misc\_feature  
 <222> (1)...(639)  
 <223> n = A,T,C or G

<400> 231  
 gcgtgggttcg cggccgaggt actccaagaa gtctgtctgc cattgatagg gctggagcag 60  
 aggtgaagag tagaacaacg cttttcagaa agattggaga ctttagaagc ttggagaaga 120  
 tttcacggga agtcaaatca attacgatta tcggtggggg cttccttggt agcgaactgg 180  
 cctgtgctct tggcagaaag gctcgagcct tgggcacaga agtgattcaa ctcttccccg 240  
 agaaaggaaa tatgggaaaag atcctccccg aatacctcag caactggacc atggaaaaag 300  
 tcagacgaga ggggggttaag gtgatgcccc atgctattgt gcaatccgtt ggagtcagca 360  
 gtggcaagtt acttatcaag ctgaaagacg gcaggaaggt ngaaactgac cacatagtgg 420  
 cagctgtggg cctggaaaccc aatgttgagt tggccaagac tgggtggcctg gaaatagact 480  
 cagattttng tggctttccg ggtaaataga tnaactccag cacgctttta ccatcttggg 540  
 tggcangaaa atgctgcatt gcnttctacg atntaaaagt tgggnaagga ggccgggttan 600  
 aacnccntg aacncccttt tgtgantggg aaaattgcn 639

<210> 232  
 <211> 369  
 <212> DNA  
 <213> Homo sapiens

<400> 232  
 ggtactaaaa ggctcaaaa taattagtga cagaaatagt gttattaatt tgctaagctc 60  
 aacaataagc aattccttaa ttaaaatctt cgagatataa atttgatgac tattctcttc 120  
 agaaatgaca tactggatt atgttaatac tcacaagcct tattagtcac acatataaac 180  
 atggcctcat gcaatcattt gtctgtatat gttactctaa gttgcatgag cacaaggttt 240  
 aatatctata tctttaagaa aatacttgat attataaaca gagtaaaaga catgatatag 300  
 tagtgattac taataaaaaa aaattagcag cttaaatacta tctatatttg aaaaaacgta 360  
 gtcacaagt 618

<210> 233  
 <211> 618  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(618)  
 <223> n = A,T,C or G

<400> 233  
 accctctctt ccagcaccca ggccagtatt gagatcgatt ctctctatga aggaatcgac 60  
 ttctatacct ccattacccg tgcccgattt gaagaactga atgctgacct gttccgtggc 120  
 accctggacc cagtagagaa agcccttcga gatgccaaac tagacaagtc acagattcat 180  
 gatattgtcc tgggtgggtg tttactcgt atccccaaaga ttcagaagct tctccaagac 240  
 ttcttcaatg gaaaagaact gaataagagc atcaaccctg atgaagctgt tgcttatggg 300  
 gcagctgtcc aggcagccat cttgtctgga gacaagtctg agaatgttca agatttgctg 360  
 ctcttgatg tcaactcctt ttccttggt attgaaactg ctgggtggagt catgactggc 420  
 ctcacaaagc gtaatacccc attcctacca agcagacaca gaccttacta cctattctga 480  
 caaccagnct ggtgngetta ttcanggttt attaaaggca accttccctg acaaaggata 540  
 ccacctgctt ggcaagggtt gaactcccag gcctgcnngg aaggaatgcn cgggggggatt 600  
 nctggggggg ggnccnncn 618

<210> 234  
 <211> 603  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(603)  
 <223> n = A,T,C or G

```

<400> 234
accagatgga aaatgttttt ggtgatctgg ctgctgctta aagccagttt tccctaagaa      60
ctccaaaggc taaactctac taggggcaga gtgtgaggat agatttctaa tcagagaaaa      120
gtggcctcca ggagctttca tttatgtctt ctccagacca gggttttctg ttatcttctt      180
ttaatcccc tccaaccaac aggtgaagtt cttccagccc acagaggtag taatatcatc      240
ttttctatct cctcctctcc tttggccatg taatgaagca aaatattatt tatttagccc      300
aggcttgaga gccactgttt gtggacagtc ttcatctaga ttccataccc tggcctaggc      360
gaggtaaggc tctctgggta ttgccaggat ggagcccctc taccctcangt ctgctgtang      420
gaatacccta attagttgan gcatgctttt ggaatcctgc atgttggcat atggctggnc      480
tatccttttt aaaanctctg ggtgggggna tctggatatn gattaagang ggacaaggag      540
ccttttcttg gctaanggtt ncaatacctt tttgaatggg gccagccctc aggcttccca      600
ccc
  
```

<210> 235  
 <211> 328  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(328)  
 <223> n = A,T,C or G

```

<400> 235
gcgtgtcgcg gccgangnac atggacnaca ggtgangaac aggtgaacat ggaggttgta      60
gancccgagg gagggggagt cacttggttt ggggcaaact tgctaaatgc aggaccacag      120
gaaccanctn ttcantncc gtgaganttt ggctgcccان gccanttagg ggtgtgggcc      180
tgcacggnag acagttatcc ctttctantc tggctcgtgg gactntnnan ggantcantc      240
tgcaacagta agtgggtgant tcttctgncc ancgtcagta ttttgatggg ggctttagac      300
ttgccagatn acactacntn acatcagt
  
```

<210> 236  
 <211> 352  
 <212> DNA  
 <213> Homo sapiens

```

<400> 236
ggtacacctg ttaggagctc tatcactctg aaagccaaaa gatagaatgc tcatttgagc      60
atttgcaaaa tgttctctat ttatatTTTT aaaaatctga tacatgtaag tttttctggc      120
agattctttt tgtatgttac aaaacaaaac atcaaaaagct cagagtaaga taagaatccc      180
tttttcttag aaagggtcaa cagatacttc ttgacatcat gtcctttata caatggcata      240
ttgttcatat aaaagggtctc ttatcctata aaaatcctga caaaggcagc cttctaattc      300
  
```

aatgcgtcca gtttccgttc tgcggactgc tacttgattg ttgcaaacaa gt

352

<210> 237  
 <211> 607  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (607)  
 <223> n = A,T,C or G

<400> 237  
 ggtacaaatg cgcttccagc aggaggtcat ggacagccct atggaagagg tcctgctggt 60  
 caatctttgt gaaggaacct tcttaatgtc ggttggtgat gaaaaagaca tcctgccacc 120  
 gaagcttcag gatgacatct tagactctct tggtcagggg atcaatgagt taaagactgc 180  
 agaacaaatc aacgagcatg ttccaggccc ctttgtgcag ttctttgtca agattgtggg 240  
 ccattatgct tcctatatca agcgggaggc aaatgggcaa ggccacttcc aagaaagatc 300  
 cttctgtaag gctctgacct ccaagaccaa ccgccgattt gtgaagaagt ttgtgaagac 360  
 acagctcttc tcacttttca tccaggaagc ccgagaagag caagaatcct cctgcaggct 420  
 atttccaaca gaaaatcttg aatatgagga acagaagaaa ccngaagaaa ccaagggaaa 480  
 aaactgtgaa ataagactgt ggtgaattag aatggctaga gctaccccca ttntnggctt 540  
 tagccctgcc aagtggcagg ntcancaact gtcagnttcc naatcctaata cntactttgg 600  
 gnnntgg 607

<210> 238  
 <211> 391  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (391)  
 <223> n = A,T,C or G

<400> 238  
 acaaacttag aagaaaattg gaagatagaa acaagataga aaatgaaaat attgtcaaga 60  
 gtttcagata gaaaatgaaa aacaagctaa gacaagtatt ggagaagtat agaagataga 120  
 aaaatataaa gccaaaaatt ggataaaata gcactgaaaa aatgaggaaa ttattggtaa 180  
 ccaattttatt ttaaaagccc atcaatttaa tttctgggtg tgcagaagtt agaaggtaaa 240  
 gcttgagaag atgagggtgt ttacgtagac cagaaccaat ttagaagaat acttgaagct 300  
 agaaggggaa gttgggttaa aatcacatca aaaagctact aaaaggactg gtgtaaaana 360  
 aaaantgtna nnaaaaaaaaa agcttgcct n 391

<210> 239  
 <211> 466  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (466)  
 <223> n = A,T,C or G



```

<400> 239
gggagggaga cgggggagag agagaaaaaa aaaaaaaaaa aaaaaaaaag cttgtgttgg      60
tcccagcggg tcagctgagg tagggacgtg ccgtaggccg gaatgttacc ggctgttgga      120
tctgtggatg aggaagagga tcctgcggag gaggattgtc ctgaattggt tcccattgag      180
acgacgcaaa gcgaggagga ggaaaagtct ggccctcggcg ccaagatccc agtcacaatt      240
atcaccgggt atttaggtgc tgggaagaca acacttctga actatatattt gacagagcaa      300
catagtaaaa gagtagcggg catttttaat gaatctgggg aaggaagtgc gctggagaaa      360
tccttagctg tcagccaagg cggagagctc tatgaaagag tggctggaac ttagaaaacg      420
tttgccctctt gcttgttcan tgaagtgagg aatgtgttta ctgggt      466

```

```

<210> 240
<211> 616
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(616)
<223> n = A,T,C or G

```

```

<400> 240
ggtacaactc ttgctaattg aatgctataa tgcacaaggt caaggattta ataaattcta      60
aaagtgtcta catatatcag tgataactgt attattagaa atataaatgt atagaaatat      120
aaagtatatg gtattaaaaa cagaccttgc taatataaac atataaaag tatgtcactt      180
ctcctgtaat aacagcataa agatcgatct acagtttgcc cttcgcctgg cactcttaaa      240
ccactcctcc aatgggtcaat gttgacctg aatcaacagc cgctgaaccc aggagacccc      300
acagatgtgt agattcagca cctanagggc cccctaccc tctgtgctgt gtgttcccat      360
gactccagaa ataattaatc gcaacttgca ttattaagtc cacaggcaag ttttgaaatc      420
taactagaaa aagtagcagc aaaggccaaa ataccgcggg aatttggtta gaaaagcaac      480
cagaatttct taaaatgctt tcanttcaag gtctgaatta aggtgacntt aggtcccacc      540
agcnttaacg nagttggggn atgttttgct gntggttttt naaaaaagaa gaatctgcna      600
taaacatgtc ctttgg      616

```

```

<210> 241
<211> 598
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(598)
<223> n = A,T,C or G

```

```

<400> 241
ggtactctat gaatgtgtta cccaggagac cccagagatg ttgcctgcat acatagcaat      60
ggatcaggct ataagaagac ttgggagaag agaaatgtct gagacttctg aactttggca      120
gataaagttg gtgttagagt ttttcagctc ccgaagccat caggagcggc tgcagaacca      180
ccctaagcgg gggctcttta tgaactcgga attcctccct gttgtgaagt gcaccattga      240
taataccctg gaccagtggg tacaagtcgg ggggtgatatg tgtgtgcacg cctacctcag      300
cgggcagccc ttggaggaat cacagctgag catgctggcc tgcttcctcg tctaccactc      360
tgtgccagct ccacaagcac ctgccaccta taggactaga agggagcaca agctttgctg      420
aactgntctt caaatttaac agcctaaaaa gccagtgcga gctttgttga natggctcct      480

```

ttgcttcttg	gaaatccaca	gccatggtga	tgtgaccgtg	ttggccggga	acctacctga	540
acgtgacttn	tggcacaacg	tgaccaacct	naaaccttaag	catgttttaa	gtttangg	598

<210> 242  
 <211> 565  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(565)  
 <223> n = A,T,C or G

<400> 242						
acagagcttc	gggtagcaga	agaggaatgg	cctatggaca	tattgactct	tatggggcag	60
atgatatgta	ggaggagggg	gctgggcctg	ttgagcgacc	gccagtgaga	gggaaaactg	120
gcaagtttaa	agatgataag	ctgtatgacc	cagagaaagg	ggcaagggtc	ttggctgggc	180
cacctccaca	tttctctagt	tttagccgtg	atgtgagaga	ggagcgaac	aagttagacc	240
cagtccttgc	agcaagatgc	tcagctagca	gagctgactt	cctgccacaa	agtagtgtgg	300
ccacacagtc	gtcttctgaa	ggcaagctgg	ctacaaaagg	tgacagctcg	gagagggaga	360
gaagggagca	aaatttacct	gcacgttcca	ncagggc	tgtgagtatt	tgtgggtggtg	420
gggaaaacac	ctnaaagaag	tgacagaggaa	cctgtggtca	ggccccaat	cagaaacctg	480
gcaggtccaa	ctgcgtgaaa	cccaaaattt	ttttttgatc	ctgatgatga	ntgaccatnt	540
ccncaccgta	cctttggcgn	gaaca				565

<210> 243  
 <211> 647  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(647)  
 <223> n = A,T,C or G

<400> 243						
ggtacttggg	atgggggctg	ttttttggct	ggtctgagtg	caggactttg	ctgctaggat	60
gcttaccaaa	tagaaatttg	actcagagcc	tgtggctggg	gaattgtcct	caggaagtaa	120
aatggctcgc	cagctttcct	acctgcttgt	ggatgcctca	gatagcaatg	gtcggacagg	180
acacttcagt	gtgggaagca	gcacccggtg	aggctgtgct	ctggcacagg	gggatcctga	240
atctcccat	ctcttctaag	ctgacctgtc	cacacattct	gagggattaa	gcttagagca	300
cctaagaaca	gcagcctccc	caggagaggc	cagggacca	agtggcagga	atcctagaca	360
actctacgct	ttttctgcac	taaccagctg	ggtgactcta	aacatgtcac	ctccctntgg	420
cctnaacttt	ctcatcgacc	aaacgaanga	gagtagactg	ngctttcagc	ttaagaccga	480
aaaccgtatc	tttaacccttt	tctggnacct	tgcccggccg	gccgttcnaa	angggcaaat	540
tccnnacact	gggcggccgt	actaagggat	cccacttngg	gcccacactt	ggggtaaaaca	600
tggcanaact	ggtncctgng	gnaaatggta	anccgttcca	aatcccc		647

<210> 244  
 <211> 603  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(603)  
 <223> n = A,T,C or G

<400> 244  
 acaacattca gggctttctt tttttcttcg gcaagctctt cttcctcagc agttttcttt 60  
 tcatttacct cttcctgttc ctcttcactg tcagtttcta gaaatcgaga gtccatgcgg 120  
 aatctgtcat cggtgccaaa gtgcgactgt aaatccatga gcttctgtcc agctctgccc 180  
 tcaaactgag gtttaatttt gaacctatta ctgtcatctt cagaatcaga ttcgtcatca 240  
 tcaactgctat caaacagctt ccctgatgtt ttacccatag actctttcac ccattcctct 300  
 cctggatggc tctgctcctg agtcgatgtc tctctgtttt cacattcact gtcagaaccg 360  
 aagatgatgt gcgttggctt atcctctgga tgaccatcca aattgccaga gcattatgca 420  
 ccagcttctt ctgcactctt tgctttttgc ctgcgttcca aggctgncaa acgcttcttn 480  
 attggcttca acatgcttat ctttagcact cacatttgac gaattactaa tngaaaaggg 540  
 agaaaanagt tttggattcc ccgagngccc ttggatgana cctttgggga ttcttganaa 600  
 aag 603

<210> 245  
 <211> 640  
 <212> L.A  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(640)  
 <223> n = A,T,C or G

<400> 245  
 actgggcacc attaagtagg atgcaggaga tcaggtggcc caggccttcg aagatatact 60  
 ggaacttggt ctgctgaagg ctggcgctca tggcctcttc aatggcgctg atatctttgt 120  
 tgagcttgac caccaggggg tcataatcca tactttccac attagccaca atggcatagt 180  
 tccccctcct tgcaagaggg ataagatagt ggaaacagtg aaccctcact tccagatgta 240  
 agacaagcaa gcagcggtca gccatatcct ggaacgattt ggcaagttca ctgagagtct 300  
 gcatgatctg ctctgacact ggggggagat ccgtgttcgt gtggctgctt gagcaggaga 360  
 aagcatctgg gatgtagaaa gattggaaga aagctgactt ttgttcgact tgccaaccat 420  
 tccaagcttt catgcntgtt ngccaaggct ttgangggcac ttgaccgtca cgaaggatnc 480  
 ttgtggaagg antaatttat caccaagggt ccaatagaac tttagactcc ttgncaaaac 540  
 tggccttatg aaaacttntt cntcncctct ttggcctanc tgnntngggg tngncctntt 600  
 cattccantt gggnaaaaaat tcaaanattg ctgggtcttn 640

<210> 246  
 <211> 608  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(608)  
 <223> n = A,T,C or G

<400> 246  
 cgaggtactg tcattgaagt ggaaccagcg gccttcgtga gttgcgtatg ctgtgtaatg 60

tccagaacca	accccggaac	catggtgcac	caccacagcg	gcgaggatcat	acaggcagct	120
ctccggggcca	ctgttctcag	gctctagtaa	gtagcatttc	atgtctaggc	ctctcagtgg	180
aaattctacg	tatgtatcaa	ctttatttct	taaatatgct	gtccaatgaa	atcttttcaa	240
atgtaagcat	agcaccttgg	gtagtttttg	aatccaaaac	ttttttgtgg	acttttgttt	300
ctttttgcat	ttatggcaca	tatataactc	tgtctcatca	agttcttcta	agtcggtaaa	360
actgcgaaga	caatctcgta	acgaacaaac	tggtccattt	tcttgattct	tagagcgctt	420
acttctgaac	tgacttggaa	tatctaata	aaggtctang	gaatggatca	aacttttaga	480
atctgccccca	tatgaggcag	ttacctcatt	ttggagaagc	ctccgaatat	agccggacaa	540
cagtnaagct	ccattatgna	ccttggtacc	ttgcagacag	ngtaaaatnt	cctgcaaaat	600
gntgaccg						608

<210> 247  
 <211> 632  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(632)  
 <223> n = A,T,C or G

<400> 247						
acagaaagtc	agagaacact	tacagaactt	ggaaaactca	gctttcacag	ctgacaggca	60
taagaaaaga	aaacttttgg	aaaactcaac	actaaacagc	aagtatttaa	aagtaaattg	120
aagcaccact	gccatttgtg	ccacaggcct	tcggaatttg	gggaacacat	gtttcatgaa	180
tgccatcctt	cagtcactca	gtaacattga	gcagttttgc	tgttatttca	agaactgcc	240
cgccgtggag	ttaaggaatg	ggaaaacagc	aggaaggcgg	acataccaca	ccaggagcca	300
aggggataac	aatgtgtctt	tggtagaaga	gtttagaaag	acactctgtg	ctttatggca	360
aggcagccag	actgnattta	gccagagtc	cttaatttat	gttggttggg	agaatatgcc	420
caacttttagg	ggctatcaac	agcaggacgc	catgaatcat	gcgctccttt	tggaccctta	480
ccttggaact	tcaggcggnt	caacgggggt	tccgctnaac	attttgcagg	gaaatctact	540
ttgctgcagt	accaagtgg	gctaaatgga	catttntgg	gcacggtnnt	ttcaggggnt	600
ntccaaatnn	ggttactgcn	tanttgggga	aa			632

<210> 248  
 <211> 624  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(624)  
 <223> n = A,T,C or G

<400> 248						
actccgagg	gcctggcgag	gacatgtaga	aagactgcgt	tttccttttc	aatcggggcc	60
ttttgttggc	caacaccaga	ctgcgcgggc	ttgaactgat	gatttccgaa	atgaacttct	120
tgcatccac	acacacctcc	atgggtgctcc	agtcctccat	caactctttg	ggaaactgga	180
gttcttcac	tgatttgtcc	atagacttag	attttgagga	gaacctggca	atgctccgaa	240
gtggccgatg	atgggcagtg	gagggttttt	ctgacctcat	actactttcc	cctctttgca	300
gagcagaagg	tcccaatgaa	aagataggaa	gagtggagta	tggtttggag	ggcagcccg	360
atctttttgc	aacactgtga	gcacaccggc	ctnttacaga	actgacaggt	ataagacca	420
gtgaagaagg	aaaaccttct	ggttcggcaa	ccaaagcaga	gctttntctt	tttcaagncc	480

tgtnaagnct	ttatctggtg	atattttcca	ntntgcntta	ccaggaccgg	cgaatatgnt	540
ncttnttccc	agtagacnag	nattcnctgg	gaccaaattc	taaanaccgg	acttntctgaa	600
gnngaggact	gcttcgttta	ggct				624

<210> 249  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(636)  
 <223> n = A,T,C or G

<400> 249						
acagtaaaaa	gtaaacttcc	ctccatccca	ggcctgccag	catccctgat	gccgactttc	60
tgggtgtggc	ctagggcccc	tcagtgtaat	gtaggggttg	tgagcacaga	ctttggtgcc	120
agtttgctag	gttcgaatcc	tgactccctc	ttttagcttc	tgtgcttcaa	ttgaaatact	180
gtgcctcagt	ttctccttta	taaaggcagg	gatcatgaga	gtgcctgtcc	cttgtgagca	240
ctatgaaagt	gtttagctgtt	ctttaccaga	ataaatgcat	ttctatatct	tcccatatgc	300
attttgnata	tttttaaagt	atttcaaaca	caaagtttga	aacagaaaat	tgtgtaacat	360
taactatgaa	cttaccaccc	agaatttaca	aatgctgaca	ttttgcaata	tttatttcng	420
atctattttt	aangggggga	accctgcagt	tactgnttaa	tcctttccac	ccacctttta	480
attttacacc	angagcatag	tggtcatacc	tangctaatt	ttttcagtac	ctgatataat	540
tggagaactc	cttcctaggc	ataaactttg	nccctttttt	taanagtggg	taacctttgg	600
gacnaagggy	cttgaacaat	tggcccatcc	cttttq			636

<210> 250  
 <211> 669  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(669)  
 <223> n = A,T,C or G

<400> 250						
ggtacataat	ccggcagctc	catggcatct	cgcttctggt	gctgtgcctc	agccccaatc	60
agaagggttg	aatgagtggc	caaatgtctt	cgagcgaag	tcttattggg	tgggatgttc	120
aataactgag	ccattgtttc	tacgttaaaa	cgaggctcta	gaaccatgag	cccaccatgg	180
acaccactgc	ctctgagatt	gggcgcata	tctgccaaat	ccacggagcg	cagccactcc	240
atcactcgat	ggttagtcca	cttctgaact	tctgatgggg	cgatggtatt	ctcatcagat	300
ggccgcctcc	gtagacagtt	tggttcaaaa	gttattgata	ctcaggacct	ggatggccct	360
tttgatactg	agatggtgta	ncacacttac	cacctttcag	agacagtaag	tcatcaacag	420
tcatgtaatg	taacattcga	ccatnaaccc	ggccttnatt	aaactgggtc	ttatatattga	480
gggaaggngc	atggcattcc	aacctntaa	nggaccnnn	ttggaaatcc	actttcccat	540
gaatgggttc	ntttttnaaa	atcccanggc	nttngaaagg	ctaacttggg	nggttcnttt	600
tcatgaaang	aaagcctgga	ttccaaggtc	ccttttttaa	aactttgtgg	naaaccttgc	660
aaaaacntn						669

<210> 251  
 <211> 670

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(670)  
<223> n = A,T,C or G

```

<400> 251
actattcaag aggtgaagag aaatgtgtat gaccttacaa gtatccccgt tcgccaccaa      60
ttatgggagg gctggccaac ttctgctaca gacgactcaa tgtgtcttgc tgaatcaggg      120
ctctcttatc cctgccatcg acttacagtg ggaagaagat cttcacctgc acagaccggg      180
gaacagtcgg aagaacaaat caccgatgtt catatgggta gtgtagcgga tggagatgac      240
tttgaagatg ctacagaatt tgggggtggat gatggagaag tatttggcat ggcgtcatct      300
gccttgagaa aatctccaat gatgccagaa aacgcagaaa atgaaggaga tgccttatta      360
caatttacag cagagttttc ttcaagatat ggtgattgcc atcctgnatt ttttattggc      420
tcattagaag ctgcttttca agangccttc tatgtgaaag ccccgagata gaaagcttct      480
tgctatctan ctnccccntg atgnaaagtg tggtnaccca cgggttctgn gttaccaaat      540
gctttggggc tгнаанccat tgggttcctt attctgggtc aaaaattttt taaccggggc      600
nttgggaact tgccaanggn ntccaccnga gccangaatt ttcaacttgg gccaaaaaac      660
cttttgnngg                                     670

```

<210> 252  
<211> 498  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(498)  
<223> n = A,T,C or G

```

<400> 252
acacagcaca ttctcttaag agaaaacagg aatgaacatt ctcagaaaca ttcacattgc      60
tcacaaatg tagctttacc caaagtatat aggaaatggc aaaaacctaa cctagctgga      120
cattttatac aagtaagtca aagttcaaag gaatcctcct atctttattc tcagaaatcc      180
aatgttgaat atcacagttc ttctttaatg gaagcagaag attcagagtc cttgtctccc      240
aaaatgcctc agccagggtc agcacagaga gtggaatata aaaagcttaa ttgtgttaat      300
acatggaaga caacagttct cagtcaacct agccacaatt ttctgtcttg gccatctgta      360
agaaatgact accgtttgaa attcaacttt cacattcaaa aaaaagaaaa tcaattcagc      420
tttnagacac aaagcaaaac caaaacaaaa aaacnaatgg catagtctac atatttnacc      480
ccttgacaat tgggggaa                                     498

```

<210> 253  
<211> 433  
<212> DNA  
<213> Homo sapiens

```

<400> 253
acgtttcagt tcaagtgcaa aaaataacta tttgctgaat tctatttctt tcagttattt      60
tatttttaag ctgtgtttta ttgtgaagcg agacatccaa gtgtagaatt tcttatccca      120
aatgcagtat tgctccttgg ttacgcttcc tggggagaca ggggttgctg tgcttgagtt      180
caaagtcagg tccatcatat gggttagtaat ttcacctgtc tggggctgca gagtgggttc      240

```

actgttcatg	tttgagctg	ttggcaaagt	aacgggtgtct	gagacattga	gccctgtttc	300
caaaagggtt	cttttctcac	gcatttttgg	tgatatggtg	aggaaagagg	taaaggaaga	360
atttggtggc	aggataagtt	aactggtgac	ttgcattggt	ggggtgaagt	tggttggggc	420
aatctttggt	acc					433

<210> 254  
 <211> 652  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(652)  
 <223> n = A,T,C or G

<400> 254						
ggtacaaacc	caggcctggg	cctaggaaaag	ggcagaagaa	aggcaaaggg	tcccttggag	60
caggaaccca	tccctctctg	cttataccca	gcacccctca	tcccagggtc	ctttcttcaa	120
cctccgcctg	cctctgggaa	cacagagcac	caagaactga	caaaccggga	ccctccaggg	180
ccacagcgtg	gggcagagtc	caggcttctg	tctccccgca	gtgggagatc	tggggagctc	240
agtgaacctc	ctcacccctc	tgccagtatg	aagttggg	gcgccttctc	tgtccccag	300
aacagaacaa	actcttggtc	tctgtggttg	gggaaaagg	gtggggggct	tggaacctag	360
aagaagctga	gctgaattcc	tccaggggcc	agggtgaaac	cccaagggga	gtttctgaga	420
cttctagact	tggccattct	ccacttttct	cttccaatga	ctccggtgaa	gcagttaaaa	480
gtctnggctt	agggcaactg	gtaggacagt	ngggaattty	ncccaagaca	tttgnngggt	540
tcaaatnaag	gtttcccaac	accngaata	ttatatggan	cctgccnggc	nggccgttca	600
aagggcnaat	tcngnccctt	gngggcgta	ctaagggaac	ccactttggg	cc	652

<210> 255  
 <211> 605  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(605)  
 <223> n = A,T,C or G

<400> 255						
ggtacgacag	ttgtgtgggt	ttattgggaa	cctccaacat	ctccacaaca	atgtagtatt	60
gtggaaggcg	ggtaagttta	atgaacagtt	tattcttaga	aaggtttcca	ataggatgag	120
ttgagtaatt	ggaaagctgc	aatgtttcac	tgcttatcgt	aggcagatgt	tttatagact	180
gcttgcaacg	ctgttggtcca	agccaaaact	taagttgctg	aatccagggt	atgattcgtt	240
tcatatcatc	attcacagac	ttctccatgt	catccagagt	ggcctgggtc	agtccataaa	300
gcacaaattg	aaacattcca	gaatgtaaat	ctacaaaaat	gtgcaggcac	tctgaattac	360
cacagggctc	caagatggga	acaacaagag	ctggggagtgc	agtctctatg	gaagagtttc	420
attggcattg	aagcctctaa	gaatggcctt	cagttcttgg	agcttctgat	gagctcttgc	480
atggacactg	gnaatcangg	agttttctat	tgataagtgg	gccgatcttc	atggctcttt	540
ctactaattt	ggaatcanaa	nttgcaaagg	aggatcgtga	aaaatttnna	aggtttggaa	600
acatn						605

<210> 256  
 <211> 654

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(654)  
<223> n = A,T,C or G

```

<400> 256
acagttcaca agcttcaggc aaggggcagc ctgagactat ccgagtgatg ttgaggcaat      60
ccaggcacag caagtcattc agccacttct ccactgcata cccagggggc gtatcggatt      120
gactcctgga gggaaacctc atgcagtgtc cgcgctgatg ccaatctggc tgctcgtctg      180
gtcttattct cagcagtggt gctgacctgg ctctggggcg tctgttgacg gagctgctga      240
attagcttga gggacagtga ccggccagtg ccctcatagc cattgatggt ggatgccatg      300
aaaacaaggt aggggccaag taggctcttc accaagggga gggggatggc ggcagcttca      360
tcaatcacaa ctagttcagc ctggcccagc ttacacagcat ctgcaggatg tatatactga      420
atagtctggc tgngtctcga aatacattca ctctgatac  tgnnttggtg aattcangaa      480
ttanagactg gataatctca taatccaaag gttcctgaaa nttgcanaac attnaaatcc      540
nttnaatncc aattcaaccc aattttgang ttttaanggc tttgggangg aaccaanaan      600
ttgggggtacc ttggccggaa cccctttaag gggnaattca gncacntggg gggg      654

```

<210> 257  
<211> 594  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(594)  
<223> n = A,T,C or G

```

<400> 257
actgctcttt tattacggta atacttgcta gtgggatttc tctcttcacc aaggctgcct      60
ttactgtgtg aaggacctgt cagtctggct gcagccaagt tggatggagt cctcattcga      120
agacttgact tagccatttc atgatgttca atttcagcct ttttcatata aaatattttt      180
ttaattgaat ttgcatcctt gaatacttga gagccaggct cattataagt tttggcattt      240
tttgcgagga gatctatatc tttggccatt gcatgaatac ttttgtagct tccattctgt      300
atcctctggg caatggctct gagatctata ggctccttaa ttattgcata ataactctgga      360
tattgcactt tagaaggcaa gtttctgaaa aaagtcgcta atgagacgtn ctgatggatt      420
gnagctacca ctatggcttc aagaaaactgc ttcaggaact ncttcaagta agctggagaa      480
aaatcttnag cactgggncc tggatgggct tggccatctt catcaataac ttcgncaatt      540
ggttctctnt ttgaaccaac ctcatntttg gtccaaggna ccttggnccg gaac      594

```

<210> 258  
<211> 648  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(648)  
<223> n = A,T,C or G



```

<400> 258
cgagggtacct tgctgtttat tccttagtct agcagcatcc ttagtttgta gtatatctta      60
cttagttgca actaaaaaaa attgctagcc taggcttta ctgggagttt ctattatcta      120
gaaggttact gtgaaccttt cagaaaaagt gaaagcaacc aaaagagctg tctcaaagac      180
tgtgtcccc cagagtttgt ccagctctta ctgtagacac tctgaacagg cacggttatc      240
tcatgtccaa agctcataac agcacattag aagaaagtgg ggagcctgtt agaagcaggc      300
atattgatag tgtgggagaa gacatagcaa attacttagc agatatttta aaaattttta      360
aatccaacag cagtctgagg caaatgattc tgnatactc agggctgana gaatcacttt      420
atacatattt ggtatagccc ttctatttta tgaaagtgtt tacataccnn agactngatc      480
ctataataat accttatgaa tatactttac ttttcatcat ggaaaatgtg aatatactng      540
cntgatgggt aagaagaagg ccggagggtt cctaccntnc ntgaancctn ccttaaaaaa      600
aatccnngtt taaanngtgg ncttggnaaa ttccttantt tcccaaaa      648

```

<210> 259

<211> 224

<212> DNA

<213> Homo sapiens

```

<400> 259
ggtaacttcaa aaagaacatc aggattaaag ttcctcagag tatgtttctgc tgcttgaact      60
ttacttaatc ctgcttgatg aggttggaag aaaagtctat tcatattggc tagttccacc      120
ttgtcataat caaagagtag caacttacca atgccacatc ttgtcagcat ttcagcagtc      180
acactaccta ctccaccaac acctactatt gctacggcaa aggt      224

```

<210> 260

<211> 584

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1) ... (584)

<223> n = A,T,C or G

```

<400> 260
ggtaacttcaa actctcttaa cgggtgatgct ctgacattca ctactacatt tactctgcaa      60
gatgtatcca atgactttga aataaatatt gaagtttaca gcttggtgca aaagaaagat      120
ccctcaggcc ttgataagaa gaaaaaaaca tccaagtcca aggctattac tccaaagcga      180
ctcctcacat ctataaccac aaaaagcaac attcattctt cagtcattggc cagtcaggga      240
ggctcttagtg ctgtgcgaac cagcaacttc gcccttggtg gatcttacac attatcattg      300
tcttcagtag gaaataactaa gtttgttctg gacaagggtcc cctttttatc ttctttggaa      360
ggtcataattt atttaaaaat aaaatgtcaa gtgaattcca gtgttgaaga aagagggttt      420
ctaaccatat tgaagaatgt tagtgggttt tggggccctg ggcacggaag aatgggtgtg      480
ttcttttctg ggaaactgna taatcttaat tggacttaat ccagnatgat gaagaaaccg      540
caggaattcc cattnggaan gggataaatc tngcttaatt ggan      584

```

<210> 261

<211> 526

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1) ... (526)  
 <223> n = A,T,C or G

```

<400> 261
ggtacttgat gttctgcagc ttctgaaagg cttcctgata ctgctcaggg gtgtcaaggc      60
tgaagatgct cttccacact gcagtcaccc tctccacgaa agacccttcg gtgcccgtgt      120
tccaagtgtg gtaagaggag gagcttttgc cctctgaaag ctgcttttcc tccagatgcc      180
tggacagtag ctccagaagg caaaacacca atctctgacc ctgtagactt tcatgcagct      240
gcagggcttc ctggggtccc acccagttgt tggccagaag cagctcttgg gcacatctga      300
gagccaggga agcagacaac tcctcctctc ctacgatggc agccaactct gcagccgttc      360
taagtgatgc cgcaccccc tttttggcca aaactttggc tgcatacata gcacaagtgg      420
cccctaaata gcatttggca gctacagcat agtggccatc tctttctagg acnggtcccc      480
agctgangna cctgccccgc gggcgcttct aaanggcgaa atcttg      526

```

<210> 262  
 <211> 703  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (703)  
 <223> n = A,T,C or G

```

<400> 262
cgaggtacag aggctgcaag aaggtggcat agagggctga aggtctgggt ggcagggcca      60
ctcctttaat aaaccaatgt catgctcaca ctccatttgc ctaccttggc atgctggatc      120
agctcacaga tgcaggatca agtcttgaag gccaatcaga aaatccttca taggcttaca      180
aaggaccacc catggaacat tgtttcccggt aagactgaaa agacaaacta caccaaccac      240
caccactctt ctttttccct tttggcccca tcaaaggaca tggagaaggt agacaagttt      300
tcttatccct acttttctaa ctcgaggatt ctccaaattt acatcagcag ctctaaggat      360
attcctcaca ggtcacaaac tgaaccacaaa atgaaaatcc tttctataaa actacacatt      420
ctttattcat acntatgact aaaggctact gaatgggnacc tgccccggcc ggccgttcga      480
aagggccaan ttcaacacac ttggccggnc cgtactanat ggaatccnaa ctttgggacc      540
caagctttgg cggtaatcca tgggccataa gcttgggtnc cgggggggga aaattggtat      600
tnccgnttac caatttcccc accaaccntt cccaancccg gaaaccntta aaggggtaaa      660
anccttgggg gggcccaaaa nggggtgggc cttaacttcc ann      703

```

<210> 263  
 <211> 475  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (475)  
 <223> n = A,T,C or G

```

<400> 263
ggtacttggt agcttaccac aaaataatac ctgggtatacc ggaccaata tctgctgatt      60
gatctaacc aaatgaatac aaaccatttc agaaaaagat atacaataga ccacatatcc      120
aggatcatgaa aattaaagct ttcaggtcac ctgacttagt gactattgct tttctgacct      180
tagactcttg aaagcctatt taaactggcc tctttctcca caccaaaact gataaaaagg      240

```

agactgatta	tgagccagga	tttacacaga	gattctctat	ataaggcata	aaggtgaggg	300
gtgagagaga	gagagagaga	gagagagaga	gagagagaga	gagacgtgag	ggagggagag	360
aaaagagaac	agacngaaga	tnagagaaag	agaaagggtat	acagtctggn	gcctcaattc	420
cagtatgntg	atttggtctc	aacacccng	tacctggccc	ggcnggccgn	tngaa	475

<210> 264  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(601)  
 <223> n = A,T,C or G

<400> 264						
ggtactacaa	aaaccaagtg	ctcgattacc	acttaacatg	ttcagcttga	aatgactgct	60
acctttgcct	tcaattcctt	cccacacacc	caggtataca	aatatctttt	ataccaagag	120
tccttgtaga	agtaaataga	gggaactccc	agggataagg	gagggcaaaa	aacaggaagc	180
acttgaagcc	aaaatctgga	gcaactttta	agaaggaaga	gacgtccgtc	ctattttcat	240
atctctgcat	ggatctccca	tggagaactt	gagttaaatg	taatgattac	acgtggcaga	300
aagacaactc	tctagcacag	tgtttctttc	acataggctg	ctacattcat	tccataagct	360
caacaatttt	aataaaaaat	atctctgcta	aatactttat	attcatcatc	ataaaaaatg	420
cacagccatt	tgaaaaaaan	ggcaattacc	ctaaatgaat	attgcccana	gcacagatca	480
actttatata	nggattcttt	ccttggtctg	aaaaatcgca	ancggaactg	gcagacttta	540
tttaccaccc	atggattttg	nccagcatgg	agttaaattt	antgctgtct	ggagcaggaa	600
a						601

<210> 265  
 <211> 643  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(643)  
 <223> n = A,T,C or G

<400> 265						
actatgaaag	gcagggtttcc	ttgtctggag	gaaaagggtcc	ttgagacacc	acaggaaatt	60
cacaccgtaa	gcagcgaggc	tgtcagcttg	ttggaagagg	tcactcactcc	ccggaaggac	120
ctgcctcctt	tactcctcaa	attgaatgag	aggcctgccg	aacgcctgga	ttacctgggt	180
gtttcctatg	gcttgacccc	caggctcctc	aagttctgga	aacgagctgg	atttgttccct	240
gtttatctga	gacagacccc	gaatgacctg	accggagagc	actcgtgcat	catgctgaag	300
acgtcactg	atgaggatga	ggctgaccag	ggaggctggc	ttgcagcctt	ctggaaagat	360
ttccgacggc	ggtcctacct	tgctctctac	cagttcaata	cctnggccgc	gaccacctta	420
gggccaaatt	cacacactgg	cnggcgtact	aatggatcca	cttngttccc	aacttggcgt	480
aatcatggca	taactgggtc	ggnggaaatg	gtatccgtta	caattcccac	acatacaanc	540
cggaanntta	agtgtaannc	tgggtgctaa	tgatgactac	ttnccttaatg	ngttggctac	600
tgccgtttca	tcgggaactt	ntgccattgn	tataatgcnc	ccc		643

<210> 266  
 <211> 582

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(582)  
<223> n = A,T,C or G

```

<400> 266
actgtttacc agatctttgc agatgaggtg cttgggttcag gccagtttgg catcgtttat    60
ggagggaaaac atagaaaagac tgggagggat gtggctatta aagtaattga taagatgaga    120
ttccccacaa aacaagaaaag tcaactccgt aatgaagtgg ctattttaca gaatttgac    180
catcctggga ttgtaaacct ggaatgtatg tttgaaaccc cagaacgagt ctttgtagta    240
atggaaaagc tgcattggaga tatgttggaa atgattctat ccagtggaga aagtcggctt    300
ccagaacgaa ttactaaatt catggtcaca cagatacttg ttgctttgag gaatctgcat    360
tttaagaata ttgtgcactg tgatttaaag ccagaaaatg tgctgctttg catcaacaga    420
accatttctt caggtgaagc tgtgtgactt ttggattgca cgcattcatt gtgaaaagta    480
ttcaggagac tgtggaggac tccactacta nccctgaagt cttcgagcaa ngtaaccgt    540
cctanaatgt ggcattggag tatattatgg anctatgcca tt                    582

```

<210> 267  
<211> 565  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(565)  
<223> n = A,T,C or G

```

<400> 267
actttgggag gctgaggcgg gcagatcaca aggtcaggag ttcgagtcac agcctggcca    60
atatggtgaa accctgtctc tactaaaaat gcaaaaatta gccaggcatg gtggtgcatg    120
cctggagtc cactacttg gggctgaagc agaattggctt gaccaggag gtggaggttg    180
cagtgaacca agatcatgcc atggcactcc aacctgggtg acagagcaag actccatctt    240
aaaaaaaaagt atactaatgt ccctcaagtt cttccatatg aggtaaaggg atccaagatt    300
aagggtgaaa ttcttaaaact gttcaacaat tttgtggtgt catcaaaaaa ggaatatttc    360
atatatatta atttaacctc aatgatcaac attgttaaaa gtcagtatgg agaaagatca    420
ttctgacctc ttcagaaacc acctggtata tgaacattct gatcccanat tattttggga    480
nctaaggacn atggtgaaaa gaatcncnan attaaaagtt ctattttcna tggaccttng    540
gcccgngaac acncttaagg gccna                    565

```

<210> 268  
<211> 661  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(661)  
<223> n = A,T,C or G

<400> 268

```

cgagggtacta caaaaaccaa gtgctcgatt accacttaac atgttcagct tgaaatgact      60
gctacctttg ccttcaattc cttcccacac acccaggtat acaaatatct tttataccaa      120
gagtcctttg gaaagtaaat agaggggaact cccagggata agggagggca aaaaacagga      180
agcacttgaa gccaaaatct ggagcaactt ttaagaagga agagacgtcc gtcctathtt      240
catatctctg catggatctc ccatggagaa cttgagttaa atgtaatgat tacaccgtgg      300
cagaaagaca actctctagc acagtgtttc tttcacatag gctgctacat tcattccata      360
agctcaacaa ttttaataaa aaatathttct gctaaatact ttatatcatc atcataaaaa      420
atgcacagcc ttttgaaaaa angggcanta cccctaaatg aatattgcca agcacagatc      480
aacttatata ggattctttc cttggttctg aaaaatcgca accgaactgg cagactttaa      540
ttaacaacat tgatttgccc agcctggagt tnaatttant gcatgtcctg gaggcnggan      600
aaatgatcca gaagtaagca ccaccgncctg cngggngccan gttcaagaac ttaagcngg      660
g

```

```

<210> 269
<211> 643
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(643)
<223> n = A,T,C or G

```

```

<400> 269
actgatggga aggccaatat ttgatgcaat caccacagtg agggcagatg ccagttcaat      60
actgaagcca ctagaggggtg tgatcggtgt cagatccttc cccatgggtct ggataactct      120
tcttcccaa acccacagac caacacagat accaacacca ccatagagta gaagccatat      180
tggtgttgcc acttttgaag aaacatctcc tgtgccataa accaaatata aagcaaccag      240
aggcccaatg gcattgctta cgtcattgcc accatgggcg aatgacccaa agcaggctgt      300
aaggatctgc aggaactgga aganggagag agacttcagg gcttatcctg ggcataccat      360
tctttctaga agaaccctta ctttcttttc tgnacaccta acccatcttt gnctttgcac      420
ttatggctat cttaaaangc tnaatgaaag ncagacacng cattgcagta actggggnac      480
tgnacatttna antcccttct tggagctgna ntaggcctgt cacttctcat ttcttngcen      540
ttggtaactt ttttgnncgg atgaatcnga gnatgcncat atgcntggat tganntactn      600
tatggcctaa ggggtgnncgn ggtectcant tcncttggan aga      643

```

```

<210> 270
<211> 650
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(650)
<223> n = A,T,C or G

```

```

<400> 270
gggccacatc tgccagagcc tggagtctgc gaaggccggg acccggttcc ccggcccaca      60
gtgggggtgt gcaaaccoga gagaactggg ttgcaaattc gtgaagaatc agcatcatgt      120
ttggcagctg agtattggag ccaggagcct gccatgaggt tttgagaaca gagggtctgt      180
ttagagctgg cagcagcatc tcagcccaag agaaggttat attcccagag gatgtcagtc      240
ccaaggacca gtagctgcca tcagtttggg ttctgaaaac taactggcat caacactggg      300
tgtagaaaca tgcttgccct atgtatcaga ggacatgctc agcaagatcc aagagatata      360

```

tttggcaact	ttttctagaa	aaggcacatt	gggtatcatt	cattacattc	ttgagttttt	420
ttgggttttt	tttttttttt	tgaacagtct	tgctgnattg	ccangctgga	atgtgggtggc	480
caatcacanc	ttattgcatc	ctaatacccc	aggcctaagc	aatcctcccc	ttganctggg	540
actanggtta	cagncacctg	gtaaaatttt	ttttgtgaac	ggntcttatg	tgccagctgg	600
nttaggttct	nggntnaang	gcctctgcta	nnttcaaggg	nagccatttg		650

<210> 271  
 <211> 620  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(620)  
 <223> n = A,T,C or G

<400> 271						
ggtacacagg	tcccaagctc	tttaaggagc	ccagtagtaa	atcaaacaag	ccgattattc	60
acaatgccat	atcccattgc	tgccctggctg	gaaaagtga	cgaacccac	aagaattcca	120
tattggagga	gctgagaag	tgtgatgcca	atcactacat	catactgtt	cgtgatgctg	180
gctgccagtt	cagggcgctt	tactgctact	atcctgatac	tgaggaaatc	tacaaactca	240
ctggcacggg	gccaaagaac	atcaccaaga	aaatgatcga	caaactgtat	aaatacagct	300
cagaccgaaa	acagtttaac	ttgatcccag	ccaaaaccat	gtctgtcagt	gtggacgcac	360
tcacaatcca	caancacctg	tggnanccaa	cggnctgcat	gccaaagaag	ccaaactcgt	420
aatgaccggg	tgcaactggc	tccaaggggtg	accagactcg	taaatgatgc	cttgtgggtg	480
atcaaagggtg	cacggggggc	tanttantgg	ttanctattt	ggtcctgccg	gcnggcgttn	540
aaaggggaatt	caccactggg	ggcgtctaag	gaccacttgn	ccacttgnga	anatggntan	600
gttctnggga	aanttcccn					620

<210> 272  
 <211> 670  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(670)  
 <223> n = A,T,C or G

<400> 272						
cgaggtactt	tatattacta	aatgtctgaa	gacaaaagag	caattggaaa	tctctgtttc	60
ttgtttcgtc	atacatagga	aggcgacgtg	atgcaaattt	taacacaaga	ttttattaaa	120
gacgggcaaa	ttggtgagga	atacctgaat	ttctggagat	atacaaatgc	gtgaggctgg	180
catcatatgc	aaatgtggct	ttacaaattg	gttttatttt	ctagctgtat	ttaaagaggt	240
gttcaaaatt	ccctactaat	caagaagcac	ccctgaaaaa	actatgagat	aagatagtgt	300
tattaatggt	ttgcatctaa	agaccaggaa	acacattagc	caatacagtc	cacaatcggt	360
gaaatgctgc	cgtgcnaaat	gcacgtgcat	atgcnttttt	actatattcc	ctnagagacc	420
gtaaaacaac	naccaccacc	aaaaaaaaac	ngtgcctnta	aatngngggc	naacctttcc	480
aaaccaccgn	cttactctta	ctgggggttta	agggaattca	ggaagcttcn	tttanccana	540
aagctnaacc	ccttcagttc	ataanccttt	nccttggaat	aaggcctgnt	ntggctacct	600
aaaaccaagt	ctgggggaaa	aggactcatt	ccattattaa	cnnttacncc	taagggganga	660
ataaggggnt						670

<210> 273  
 <211> 688  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(688)  
 <223> n = A,T,C or G

<400> 273  
 acacaggtaa ccttatgcag cacattgtgc taaaagtatg gaacagttaa cactttcagc 60  
 cattactgaa aataaacatg tagaaactaa gcaacaagtt aaaatacagt aatgcacaac 120  
 ttaacaattt taagttttcc acatggagca ataaagcagg taactgaata atttaaggag 180  
 atgcaaatgg cctcttccat tcttaattct cggcaattta ctcaggaaaa taaatttctg 240  
 gtcgcagccc gaacagttcc agtccgatct caccttgatg gaaagtcttc attatctgtg 300  
 cttgcccgag gacttatgaa tgnttcttct ctttcttttc ttctgaactg gccccgttct 360  
 ctttcttttc tatcctttct ttatcatgcc tggactcctt ttggcaccgg aaggagaatt 420  
 taaccatctt ctcagaatta aatggaatca ctggcttttt cnttggcctg aagaatttga 480  
 cttanttttt tnccttggctt totcaattng attaagggga ttcnccaagg acttttactt 540  
 ttaaggtttt gnaaacccca atnggtncat tcttcccctt taccgctctt ggggttaaanc 600  
 ccgggggggac tttaccgggc cttggttgaa ngaaccntt ttcggtcttt tcngggcctt 660  
 ttaacttttt ctcnctttnn ctgggagn 688

<210> 274  
 <211> 674  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(674)  
 <223> n = A,T,C or G

<400> 274  
 atttaaaccct ggtttggata tgcgcctgta tgaggaagat gatttggacc ggtagagca 60  
 gatggaagat tcagaaggga cagtgcagaca gataggtgca ttctctgaag gcatcaacaa 120  
 tctgacgcac atgttaaaag aagatgacat gtttaaagat tttgctgccc gttccccag 180  
 tgccagcatt acagatgaag actcaaactg ttgaccgtag cacctggatg aacattagga 240  
 gtgcttagtc ttttttctac ttgcttttcc aaacactcac agtatataca acaggcagcg 300  
 gattgnctat tgnttgttgn tccaacttct gctgccagaa gtttaaacag aaagcaggaa 360  
 taatgtgccc attctgaagt tgccacaaaa aataagaccc tggatgaatga aaatataatt 420  
 ggttttcttc taattaatgg aaaaatctgg gatataattat atttaaagggt ggtgcattta 480  
 aagaatgagt attttacccc gaagtgggtc ccttcatatt ccccggttg aaggatttga 540  
 nggaccgtac cnggatgggn atgaatttgg tacttcatgg tcacttgaac ccnctaagtn 600  
 ggcctttttt ggattcanaa tcatatgggg aacttcttta agccttcagg ggccncttaa 660  
 tgccnncca cctn 674

<210> 275  
 <211> 638  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(638)  
 <223> n = A,T,C or G

<400> 275  
 ggtactggca tggcaccaac atttgctcag cttctgggtga gggcctcagg aagcttacag 60  
 taaaggcgga aggtgaaggg ggagcaggca tatcacatgg cgagaaagag gggagaggctc 120  
 tcagactctt ttaaacaacc atatctatgt gaattgagtg agaactcact catcaccaag 180  
 gagatgggtgc tgagccattc atgaaggatc ccctctcatg atccaaatac tccccaccag 240  
 gctccacttc caacactggg aattacattt caacatgaga tttggagggg acgagcatcc 300  
 aaaccatata agatgggtgag acaggagaac tttgtgtgtc cagctgcact ggtctgaaga 360  
 tataactaag tcctctggact tttctcctt aattggagaa ttcctaattg tcatgatcag 420  
 cctgantgac cagtggctga ctggcctgaa aggggagata aaacngacca cagctttctt 480  
 catagaccaa tttaaccttt attcatctgn gcagcagaag ggactggncc anatanccat 540  
 caggtaggng cttgaatatg ggtactttcc nanatacttg ccggccggcc nttaaggca 600  
 attccaccaa tggggccgctc tannggatcc actcggnc 638

<210> 276  
 <211> 638  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(638)  
 <223> n = A,T,C or G

<400> 276  
 ggtacgtcag atctacagcg aacacaacta ctgccgcctt atcctctaaa tggggagcat 60  
 acccaggccg gaactgccat gtccagagct aggagagagg acctgccttc tctgagaaag 120  
 gaggaagct gcctactaca gagggctaca gttggactca cagatgggct aggagatgcc 180  
 tcccaactcc ccgttgctcc cactggggac cagccatgcc aggccttgcc cctactgtcc 240  
 tcccaaactc cagtagctga gagattagtg gagcagcctc agttgcatcc ggaatgtaga 300  
 actgaatgtg agtctggcac cacttcctgg gaaaagtgat gatgaggagc aaggacccac 360  
 cgttcctgca gacaatggtc ccattcccg c tctagtggga gatgatnntt agagaaagga 420  
 ctggcccagc tcttgagtc atccactatg aaggatcctg taatgtgacc ccagttccac 480  
 actgatctca ccgctgatgc tgcagaacag anatttgatg acgaatagge ttgngntta 540  
 tgccctctatg aggaaagtat ctngacnaga aacttgaaac cangntnttg tttacagtct 600  
 ttgatggctc atcatcatga nnngatgaac gccaaaccg 638

<210> 277  
 <211> 734  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(734)  
 <223> n = A,T,C or G

<400> 277  
 ggtacagaga tagatgaatg gaaatgggta agggaggtgt tcattcacat ccattctaact 60



```

gcaaaataca aaagtaagaa gtcattgaca tgaagcaacg acgaccaaga cgttctcaga 120
tctaaagggtg aatgatctca gtcagcctgg aaatgcacaa ggtggaaaaa taacataaaa 180
aagccataag accttgaaga acatcaatgt caaagataaa ttctaaagtc ccagagaaaa 240
aagaatggga atcaaattga cctcagacta tacgtgagaa acacggagag ccagaaaact 300
gtgatgttcc atcctcagag tttgaaggaa atatttgaag gctgaatttt acatccagct 360
taactatcaa ggcattgcaa gtcattgtat tcttaggcct tcaaggncct ngcccttttt 420
ctcngaaaag cccgaatttn aaatgctctt aaagaccgtt cttcaaccn gaagagaaaa 480
gaaanccngg ganggggtgct cttgagatat ttcagtcncc cacagggtnc ccaaattnggg 540
cctaaggaaa ttccgaagag gtcncgaaat nttnacccat taccttcccc caatngggga 600
acccccgac agggntttan ccatnggggt taaaggggtt ttgacccggg ggggccttgg 660
caaggtancc tggccccggg cgggcccntt cnaaangggc caaanttcn gncccccttg 720
ggggggccgg tanc 734

```

<210> 278  
 <211> 586  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (586)  
 <223> n = A,T,C or G

```

<400> 278
acatggtgaa tggaccacca cattttacag aaagcacagt gtttccaagg gaatctggga 60
agaattgcaa agtctgtatc tttagtaagg atgggacctt gtttgccctg ggcaatggag 120
aaaaagtaaa tattatcagt gtcactaaca agggactact gcactccttc gacctcctga 180
aggcagtttg ccttgaattc tcacccaaaa atactgtcct ggcaacgtgg cagccttaca 240
ctacttctaa agatggcaca gctgggatac ccaacctaca actttatgat gtgaaaactg 300
ggacatgttt gaaatctttc atccagaaaa aaatgcaaaa ttggtgtcca tcctggtcag 360
aagatgaaac tctttgtgcc cgcaatgtta acaatgaagt tcacttcttt gaaaaccacc 420
aattttaaca caattgcaa ataaantgca ttgccaataa attaatagact ttggattatc 480
accctggacc ccaaccatac caaggtggct ggctatgttn ccaggaagtn aangngcccc 540
cttatttggg agaatatatc agtancttgg gcgggaacac ccttan 586

```

<210> 279  
 <211> 664  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (664)  
 <223> n = A,T,C or G

```

<400> 279
accaccgagg ctagcacagt caagcctcca gctaagctgg atccctgaag cctgctatca 60
tgcagacagg ctatgcggct gcctcggacc atgctaggcc acttgctggg gtgtcaacct 120
accaccaaag ggttctttta gcaaacctca tggggaacag gaacattcct gttcatccct 180
ggccacaggc tgcagaccca gcactggccc ttgctgagat cagagcctgg ggctggccct 240
agccccctct actgacttcc tcatttaagc caattatata agctcacatt gatcagggag 300
ggagggaaag agctaaagag ggtcacacaa gtggctattt tccctgcagt gtttctgtgt 360
ggtgaaaata acccagtcca ctaaggggag ggagtgaatg gatggctgga ttttcccaa 420

```

```

getccttata gcctaattgtt gtcaggatgt gagtatgagg aatttagcct cttatagtga      480
aatgagtcca actctgggct ttgcttanah gaaagctncc gtcaggcttn ctataatatg      540
aaaagaagtc accattgggg aactagagac cccagacctt ttcatatgga tatttgagaa      600
tgtaatgcat ntangcctng tgctggaact ttaggcctnt aggcngggtta aaacacttga      660
tttt                                         664

```

```

<210> 280
<211> 448
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(448)
<223> n = A,T,C or G

```

```

<400> 280
actaccacag actgttgact tttagtttct taaagagaaa aattgccttt ttactagaaa      60
gcctttgtat attgcaattt ttctgtttgg gaaaatctaa ggatttactg tggttagtct      120
tacagaagaa atgtggattt gataaactag tgcctatcat tttaacttat gtttgatata      180
tagtagtaag ggttttatga atgttgatta ttttgtgcca acagcccaga attgtcactt      240
atatgtaagc agaaaacaat gagctctgct tccaaagtta tttaattttc tcagtgtttg      300
aatgttattt tttgtaagtg tgtaataaaa agtgtaaaga attggaaaaa atataaatat      360
tcttaactca agcatttgct ggatcatttt tctacaaaac ttgggtgtac tgngaacctg      420
tgtatcancg ttgtgtaaac ctagtacc                                         448

```

```

<210> 281
<211> 677
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(677)
<223> n = A,T,C or G

```

```

<400> 281
gcgtggcgcg gcccgaggta caccttcaca gggaatccgc aggcgggggat cttcagtctc      60
ctttaacacc ggaaagtatc aacgggacag atgatgaaag aacacctgat gtgacacaga      120
actcagagcc aagggctgaa ccaactcaga atgcattgcc attttcacat agttcagcaa      180
tcagcaaaaa ttgggaggct gaactggcta ccctcaaagg aaataatgcc aaactcactg      240
cagccctgct ggagtcctact gccaatgtga aacaatggaa acagcaactt gctgcctatc      300
aagaggaagc agaacgtctg cacaagcggg taatttcagg gctgatgtct atagggattt      360
agggctaaca ggttttcttg atcagaagaa attttgcatt tagattcagc acagggatat      420
cttctagttc taggatgtca gaacatagat atgggttgna tgatatgcat ttgggttgatt      480
aagaaaaata ttttccatag tttaatgaga atgaagaata tacccttttg aagcaacaaa      540
ncatgtgatt cccatattat catggggcta gngtatgcnc agtcctgccc ggcggcgtaa      600
ggcaatcagn cctgnggccg tctnnggacc acttggccac tggngacagg caactgtctg      660
ggaatgncc ccatccc                                         677

```

```

<210> 282
<211> 691
<212> DNA

```

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(691)

<223> n = A,T,C or G

<400> 282

cgagggtacct	tgctgtttat	tccttagtct	agcagcatcc	ttagtttgta	gtatatctta	60
cttagttgca	actaaaaaaa	attgctagcc	taggctttta	ctgggagttt	ctattatcta	120
gaaggttact	gtgaaccttt	cagaaaaagt	gaaagcaacc	aaaagagctg	tctcaaagac	180
tgtgtccccc	cagagtttgt	ccagctctta	ctgtagacac	tctgaacagg	cacggttatc	240
tcattgtccaa	agctcataac	agcacattag	aagaaagtgg	ggagcctggt	agaagcaggc	300
atattgatag	tgtgggagaa	gacatagcaa	attacttagc	agatatttta	aaaattttta	360
aatccaacag	cagtctgagg	caaattgattc	tgtataacct	agggctgaga	gaatcacttt	420
ataacatatt	tgntatagcc	ctttacattt	tatgaagtgn	tttacatata	tcagagctgg	480
atcttataat	aatacattat	gaatataact	ttaacttttc	atcatgaaaa	tgtgaattat	540
actgacctga	tggttaagaan	aangccggaa	ggttttctaac	atacctgaaa	tctcccttaa	600
aataattcca	ggtttaaaang	tggncttgga	aanttcctta	ctttccaaaa	tntatgacct	660
gccgggggcn	ntnr aggn	aatccnnct	n			691

<210> 283

<211> 668

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(668)

<223> n = A,T,C or G

<400> 283

acatggttct	gtgacatggc	tggaggtggg	cgttctggac	aagtaaacaa	tttactgggg	60
aggtgtctgt	gtttcacact	taggtcgcta	agtttttagc	caaggcttta	gttgctctcc	120
atgagcaatt	gtagaaattg	gaaatttgta	atgatttttt	atgagaaagg	ccacgaatgt	180
gtgttactat	tagagtatat	ccacataattg	tccagtcatg	gaaaatggcc	taaaagataa	240
tttacctgca	aaacagaata	ttatgcagct	attaaaaata	tgcatatgaa	gatttgccat	300
agagtggaaa	aatgcttggt	aggtaaaaat	caaaaaaaca	tgtaggaaac	aaaattttac	360
atatttgatc	tccactgtat	aaataaataa	aatggagaaa	catttgagaa	aaatcatcca	420
ataatgggtg	tctgtgggtg	gtaaaagcaa	ttgaaatgtc	ttccttacac	ttttaataat	480
ttttaaaaag	tatgtaaaat	gccaattatg	acaatgctaa	gctagatgaa	catcccattc	540
aaattgggaag	cccatttaaa	atttagaaag	cncggttgga	ttcccttctc	tatccttttt	600
ttaaagcaaat	ggcccannc	tgngnnnttt	ttgacccaac	ctttcaaaat	tnggctaact	660
ttntgaat						668

<210> 284

<211> 777

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(777)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 284

```

acagtattta agggattttc ctttttagctt ttcattctcca gtggcattaa acataaaaag      60
accttggcat tttttcacat acttgaatcc ctaaattgcac ctgtctttca ctttttgaga      120
cagactgaat atatctaaaa tttccagcaa taaaaaaaaa gcatttaact tgcaccaagc      180
aagaaaatat aaatacagtt aactgcatta agataatcac gttaaaattg ttactatgca      240
gcacagaact tcattcttat agtattcttg ggttcaacct ttgaatcaat tttaccactg      300
attaaataaa tgactcaaag acatctgtaa gtcattgctgc tgtgttttga aagtctttta      360
ctaaatttaag aatgcagaat ggatagtgat tattcaatta gaatttaagt aaggggatgg      420
tgatantana aggctggaaa atnccttaat ttttaaaaaa atcagaatag gcnttttaaat      480
aggtaaaatc actttcaatt nttcccaaaa acctgnangt tccccggaaa aaagggtttta      540
aggcttttaa ggtggggaat gncccaaggt ttttaactta tnccatggaa gccanngcct      600
tgcatggggn ccttagggna accccngaa tcccnttccc aaaagggggg tttaccnttt      660
tggaattnaa tttggggnaa ccttattngg nccttngggg nttaccttng gaaanaaaat      720
ttntttttta atnttttcan ggggnnggaa atttaaaggc cttttttttt gggaaaaa      777

```

&lt;210&gt; 285

&lt;211&gt; 692

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(692)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 285

```

ggtacaagct tttttttttt tttttttttt tttttttttt aaggatttac ttttcttaac      60
aagtgaacaa tttgtctcta agcgtcaatg aaaggcaaca cctccctnta atggccaaag      120
gaagagagtg gcagtaagct ggcttttcca atngtgcaca caatccttca tgccattaag      180
ttctccttgt tggaaaagaa attaggttg tttgataact tagaaaagtt agtttttagac      240
aacagtgaat ttcagctaca aatacaaaat caaatccatg tatataaggc ttctgtaatc      300
gatgtcttag aggaacatct gctcattttc tccaagcccc agtcctataa atcaaggcaa      360
gtcaagtaat taagcttcaa ctattttggc agctttgcaa ttaaaatgag cnaagcacta      420
tatctatcct tcatatcngg atatattaaa ggtccaactt ggtacnccca atnttacatg      480
ccgagaggcc taaaatttnc nntttgggtt ccnggtttaa ttaaagncca taanggnctt      540
gcnacnaatc tttttccctt ncccaaggga aatttccttc nnattaccaa acccctgnct      600
caatttnttt ccccggnaat ttgaaaggcc gggtttnttc tttcaaaaana aattttcccc      660
ggggattaan atttgggccc caatttctta nn                                692

```

&lt;210&gt; 286

&lt;211&gt; 709

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(709)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 286

```

actgtgccag ggatattgag atgctctggg ggtgtattgt atacctgcc a gttttcttca      60

```

tttctgaatt	gagttttctt	ttcttgatgt	tggtttcctt	catatcacct	caaggtttag	120
atgtgtgaag	gaataagcat	gatggaaata	atagtcttga	aaggagatat	gttgtatata	180
atcaggagga	agaggaagga	aggacttacc	cattttgata	ttttgctgta	ggtggccagt	240
tttgtttctc	atagggaaat	ctgacccacc	tgatcatgtg	gctcctaagg	aactgctgtt	300
gtaagcggct	catcaagagt	tgaacttcac	gtagccttgt	tggaatatg	gaaaaggaag	360
aaagccacag	gactgcccac	tcagtcttgg	gaagattggg	atgattctgc	acaagcaaaa	420
atgactgaag	tttatgtata	gacacacctc	taccaatcca	tcttcagctg	actgaatgtt	480
gnatgatacc	cttcttcaaa	gcagangtag	aatggtcang	gttcacccat	ggaattttct	540
acttaatttc	gtttttngga	atcaacttta	ccnnaatncc	aggtcccctt	tnggaaaaaa	600
tccttaaata	ttttgctttt	ttnaaaaaat	aanttnnggt	catanttaa	ggcccttggg	660
ttaanccang	gttnncnggt	ccnattttatt	tgaacccttt	gcccttana		709

&lt;210&gt; 287

&lt;211&gt; 231

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(231)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 287

acaagctttt	tttttttttt	tttttttttt	ttttgtanag	atgcgggtct	cactatgttg	60
cccaggctgg	tctcaaactc	ctgggctcag	gttctcctcc	tgctggggcc	tcccaaagtg	120
ctgacatcac	aggcgtgagc	caccacaccc	agcccctttg	ggtgttttta	aatataactt	180
tggcatttat	aacaaatgca	accacatggt	anatcttatt	agaagtacct	n	231

&lt;210&gt; 288

&lt;211&gt; 681

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(681)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 288

accctctctt	ccagcaccca	ggccagtatt	gagatcgatt	ctctctatga	aggaatcgac	60
ttctatacct	ccattaccog	tgcccgatth	gaagaactga	atgctgacct	gttccgtggc	120
accctggacc	cagtagagaa	agcccttcga	gatgccaaac	tagacaagtc	acagattcat	180
gatattgtcc	tggttggtgg	ttctactcgt	atccccaaga	ttcagaagct	tctccaagac	240
ttcttcaatg	gaaaagaact	gaataagagc	atcaaccctg	atgaagctgt	tgcttatggt	300
gcagctgtcc	aggcagccat	cttgtctgga	gacaagtctg	agaatgttca	agatttgctg	360
ctcttgatg	tactcctct	ttcccttggt	attgaaactg	ntggtggagt	catgactgcc	420
tcataagcg	taataccacc	attcctacca	agcagaccag	accttnacta	cctatctgac	480
accagcctgg	ngngcttaat	canggttatg	aaaggcaaac	gtgccatgac	caangataca	540
acctgggttg	gcaagggttg	aactacagge	ttacctntgg	accccgaggg	gtcctnaaaa	600
tgaagtcctt	ttgacattga	gcccaggggt	actcaaggnt	ttgttnggca	aaaancttgg	660
ccggaaccct	angggaattn	n				681

&lt;210&gt; 289

<211> 565  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(565)  
 <223> n = A,T,C or G

```

<400> 289
actcaacctt acttatagtt agcagctgga attctcaact cttccctgcc agcactatac      60
cacagtgttg aagaaattag tcaaattgct gttttcctgc ttctcttttc agctgttact      120
gtgctttgtt tgaaagtagt tttctctctc aaagccgttg cttatatcgt taagaatgaa      180
ggttttgtgt taaaatttat tgcattgcaa agggtagttt cactgaagtc atgcaccatt      240
aaataagatg aaatatttgt atttattgtc ctacttccta agccgtaact tcttttcctc      300
tgtgaatttg cattgagtc ctcattgctac actacatcgc tttagtattt gagatggcat      360
ttatgttttc tctcgtttat catgaaatgg ggtcagattc catcagattc cacctctgtc      420
aggtggactc ttgtctgcct tccatgatga gatttttttt tctccttccc tttctttaag      480
agaggctgcn gaactangng gcaatcaatt tggnaaccag tctctggntt tttttcatta      540
gtaatttcta tcatagttca ctggg

```

<210> 290  
 <211> 699  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(699)  
 <223> n = A,T,C or G

```

<400> 290
ggtacacaat tctgcatttc tctcttggtt atgggatccc agttttattg caggaggcag      60
tgtgccagtc tcagtagatg gaacacgatt ggtctattca gccatgacaa ttctgttccc      120
tgctgtctta gctttgtttg cagctagagg tgcaatggta gctggctcgg gccaaaggca      180
tctaagttaa gatatgcaga gggagagagc aggaaacaga cttctgacga gggtttactt      240
tctgatagaa ggtgacaggt ccagctagtt tggcccttcc tcttcctcca cccctcctc      300
cttgaacgca gacatgattc ttggggatac agcagccatc ttgggaccat gaagtaacga      360
gcactgagat taaggcaaaa ggatcaagac gtgaccctta ccttcgtgga gttggtgaac      420
caataccatt aaccacacca tctccagaat ccatgctatg tggnaaaaca atcttctggt      480
tgggttaaacc actgnaattc aaggtttncn ttnccttgcaa ctgaatggaa gnccttttta      540
naaggtagct tgaccaaaat gccnaaggaa ncttggcctt tggaaattgg ancccgnaan      600
acctgggttt ttaagcccat tttggcnnn tttnggnaag ctttaagggt aaggcctgaa      660
cctttggcnn aaaggggna actnggggtc cccctttcc

```

<210> 291  
 <211> 699  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(699)

&lt;223&gt; n = A,T,C or G

```

<400> 291
ggtacttggg gacttcaggg atacagcctg tccagaatat ggctatccta ctctcctact      60
cagaaagaga tcctgtccct ggaggctgta atttggagtt cgatttagat attgatccca      120
acattttactt ggagtataat ttctttgaaa cgactatcaa gtttgcccca gcaaacctag      180
gctatgcgag aggcgtagat cccccaccat gtgacgctgg gacagaccag gactccaggt      240
ggaggttgca gtatgatgtc tatcagtatt ttctgcctga gaatgacctc actgaggaga      300
tgttgctgaa gcacgtgcag aggatggtca gtgtgccccca ggtgaaggcc agtgctctca      360
aggtgggttac cctaacagct aatgataaga ccagtgttcc cttctctcct tccnggacaa      420
ggtgtcatat accatgtcat tgggtgggac ccggttctaa atcatctgct ggctacattc      480
ctgntnacac atacccttgc aactttgang cnngaaaagg taagtggggc cttcctaagg      540
aaaaggnttt tccaaggggt cntcaatctt tttgncccg ntnggntnct tnaattgggt      600
ntttggaccc cnaatttggg aaaccgaaat attnttnana ggctttannn nnggggaann      660
tntttnaaaa ccggnctcnn nantggccct ttnaggtnn                               699

```

&lt;210&gt; 292

&lt;211&gt; 688

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(688)

&lt;223&gt; n = A,T,C or G

```

<400> 292
acagtcattcc cactacctgg ctatttcatt acttgggtgct ctagacaagc tcccaagaac      60
tgactgggac ttggcttggt ctgtttctgt catttgctaat ataatatgga aaacattgct      120
gaaaagaaca gagatggcca tggatatggc taggttaggt attcatatcc aaatatctga      180
actctaacct aatgtggata tgattctgta gcattatatt aaaagctatg atgatgcaat      240
gcaggaaata acctttcatt ctcccccta gaggatcacg acagggtgct caatgcctgc      300
cttatctatg ggacagtagt gtgattctca gtgagaagtg aaggcctttg gggatttgag      360
tcaggaaaagg gaacatggct aagtgcctgg aaactctggc aacagtctgc gggtagaatc      420
tacttggcct ctggataaga aaatctgtgc ttcantgaac ttaagnggtt tgggaaaatt      480
taaccagaaa ttttnnanga agcataagtn cctgggtcaa ganaaccagc ttacggaaca      540
tgacatttct taacatangi aacctttggc caatnaatcc catnggatgg ccccttaag      600
ggaaagccat tttgggttct tggatcccaa cnttttaagt tcaaactttt tttttaagnt      660
tttagntcct nggccccctt agnaaggn                               688

```

&lt;210&gt; 293

&lt;211&gt; 572

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(572)

&lt;223&gt; n = A,T,C or G

```

<400> 293
ggtactgctc tgctaggcca gtgacaaatg gccatcagag atgtggctcg ggtcagcatt      60
gtccttcctg gtgcaggcca tggttttatc agagcactga ccaccctgtg gcactgtaac      120

```

aggtgacccat	aggagacttg	tgccctggaga	acttgggggcc	actgtggttag	gaacagcagg	180
ggttcttgaa	atggacacta	atccctaggat	tggaaaccccg	gcttgctgtc	tgctctctgg	240
gtgtctcagc	ctgtctccca	cctgcctggg	actgttttct	cttgggtgga	ttgggaagct	300
catgtgtggc	ctcatctcac	ggggtgaggt	gaagactcaa	tgaggcacta	cctgggttcc	360
acggggtgtc	ccccgtgggt	ctctccccc	gggtgtccct	gccccctgtg	caagccagtt	420
tctgctgaat	taccagacca	gctttgccaa	accacctgac	tttccttcag	aagacttcag	480
gcngaaaaac	agggttaaag	acctaccctt	tctgaacttg	gttcantgct	antgcanaac	540
caagtccttc	acaancttag	gatactatag	gt			572

<210> 294  
 <211> 692  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(692)  
 <223> n = A,T,C or G

<400> 294						
acttcacaag	tgtatgaaaa	tgatgtgacg	ttaacggctg	ataaaggcaa	aacagaggac	60
actttcttca	tgagcaacaa	accccaaaga	tacaaagaca	agctaccaga	tagtggtgat	120
tctatgctta	ggatcagcac	cattgcttca	gccattgcag	aggcatcagt	taatactgat	180
ccttcccaac	ttgtgcaat	gatcaaggca	ctttcaaata	aaaccagaga	caagactttt	240
caggaagatg	agaaacaaaa	ggactattct	catgtgctgc	atttcttacc	taatgattta	300
gaaaaaagta	atggatccaa	tgcacttgat	atggagaaat	accttaaaaa	aacagaagtt	360
agtagatatg	aaagtgcatt	ggaaaacttt	tcaagggtca	gtatgtctga	tacttgggat	420
ttatctttgc	caagaacaa	actactcaag	acattcattc	cgggtggactt	aagtgtctcta	480
gtggnaatgt	gaaggcccn	gaagaaaacn	cagcagctat	tgttatgttg	aaaatggnga	540
gagtgagaat	caagaggcnt	ttagaancct	aaacttctca	aatccggttc	caattgagag	600
aatacngggc	cntanttgat	gggaaaactg	tcnnttgcac	caattccaga	agtnnggaccc	660
atnaaaactn	cctaatttcc	ctcctttgga	gg			692

<210> 295  
 <211> 459  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(459)  
 <223> n = A,T,C or G

<400> 295						
cgaggtacaa	tgcaacaaaa	tacaaaatac	atgcttggtg	aacattcggt	catatctaca	60
agacggcagc	tagagattag	gtttcaatac	tgaccattta	ctatcctaca	agcaattagc	120
attacatcat	aatatgccat	caaggcaact	ttttttatac	tgaaaaaatc	aaaataaaaa	180
ccgttatattg	taaactttta	tacgaaatgt	aactcttcaa	gtggaaataa	aaaataaaat	240
ttgtctatatt	actattgaat	acacatagga	tttcaatttt	cattataccg	agaaaaaagc	300
tctttttgtgt	tgggaaaata	atgcttcaaa	aaataattag	tagaaaaacc	cactagtata	360
atgnttttgcc	tttcaatgcc	accacagatt	tgggaacata	ctgaggatga	aagttataga	420
cattcacagg	tgaaatgtcc	tgcenggcgg	ccgtcgaaa			459



<210> 296  
 <211> 677  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(677)  
 <223> n = A,T,C or G

```

<400> 296
taaagactac ctacacatag atatatgatt ccaaagtcac actttctcca tccccacatt      60
agccaagtga atacagggcc aaatgggttc ttggaatgat aataacaaag cattacaaag      120
tgggtccccc tgggtccagc cttgtccaga gtttttggtt atatatttct atttattaca      180
atttaccttt taaattgtaa aataaacctt tgtgtggaca gagccaatgt ttcaatcttg      240
aatgagtaaa gaaaataactt tggaaactgat cctcattttg aaattgggtc taaattatta      300
tccatttcca atgtctgaaa ttctcttact tcttgctaaa actctctttc tgccaaagtt      360
gtttcgtaat ctgtctcaat gactataatg taaaattaaa gaagtaacca tgcttctcaa      420
ggggggaatt aaaagtgggtt aatggatttt actcaggcta attgggtggn cagaaattcc      480
taaggccaca gctttnngggg ggtccgtgta natgtccagg anggcagnga cattagtcc      540
ttcttntgnt aatcccaaaa cttagaaacc nataatctta ccttggcatt tcctttntaa      600
aatggccagg ccnttggggg ggaccttggc cggacccctt tanggggaat ccnccactgg      660
gggccgtctt agggann

```

<210> 297  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(574)  
 <223> n = A,T,C or G

```

<400> 297
accgtggtgt tagaatgatt gttatgtact gcagacaaaa tctgctttta gaggcaagcg      60
gatttctgac aaagtaactg atccttttggg tggcataaat tcactttggg gactagcctt      120
attcttcttc tgaggtcctt cgttcttcaa tttattcaat tcatcaatca aaagtgttct      180
cttcccagtt gcaattagaa gaagtctttc tgcttcagct tcttctaggg acccttttcc      240
atgttcttca tcaacacagc agttaagagc ctggctagct tgatagatca ctgtctgttg      300
catatttatt tcgttattga gttcctgcat tttctgtttg atattaactt gacaaggaaa      360
ggcattattt ttttcatcca gttttgaagt aacatcttcc ttccgaacaa tcacctgctt      420
tattgatgga cgttctgntt ctttgaatct ttgagatcta tatgcatcaa tgctgtaaag      480
aagatcacga tcttcagaac ccaggctatc accagattca actcgangga ccnagttctt      540
cggaattttc ctgggtttgg actttcatca cttt

```

<210> 298  
 <211> 535  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

&lt;222&gt; (1)...(535)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 298

ggtacatttta	gcttttgaat	gatggagaga	cacagagata	tatgtaaacg	tcaagagaat	60
cactccactc	cacgtctggg	tccacaccct	tccaggcttt	gtctggaaca	ttatgtggct	120
ggtgcctgat	tccacagtga	ggatgcagga	gcccagggtg	tgatggataa	agcattagga	180
gacaatcaag	tgtcaggaat	tgggtcaataa	gaacggctta	aataatgatt	taacaaggaa	240
gacgagtaaa	aaacaatccc	atttcatctt	tagaaagaat	taagtcacta	aatgatttct	300
tctaagttgt	tgccatttgc	ttggatgaga	tcttgaagg	tttccattct	ttctccaccc	360
agttaagaac	acattgacta	gaaatttgtg	acaagaatct	agtaaaggcc	ttttccctcc	420
tgctcctcat	tatgccaatg	caagaacat	tatagcttcc	tgngccaaag	tatttgacat	480
ccatgncttc	atcttggcct	aacttctgna	gtacctggcc	gggcccggccg	ttcna	535

&lt;210&gt; 299

&lt;211&gt; 644

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(644)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 299

acatattttcc	cgggataaga	tcaccaggcc	aggagcgaag	ctatggaaga	aaggggaagg	60
gctccccaac	tttgacaaca	acaatatcaa	gggctctttg	ataatcactt	ttgatgtgga	120
ttttccaaaa	gaacagttaa	cagaggaagc	gagagaagg	atcaaacagc	tactgaaaca	180
agggtcagt	cagaaggat	acaatggact	gcaaggatat	tgagagtga	taaaattgga	240
ctttgtttta	aataagtga	taagcgatat	ttattatctg	caagggtttt	ttgtgtgtgt	300
ttttgttttt	attttcaata	tgcaagttag	gcttaatttt	ttttatctaa	tgatcatcat	360
gaaatgaata	agagggctta	agaatttgcc	atgtgcattc	ggaaaagaat	gaccagcaaa	420
agggttacta	atacctctcc	tttggggatt	aatgctgggt	ctgccgctga	gtttcaagaa	480
ttaagctgca	gaagactcag	gagcaaagaa	ccccatntta	aggggtggagt	gtaccattcn	540
tcaaattgcca	ctgggaagct	gtttaancat	ttgngtatt	caaaaaaaaa	aaaaaaaaant	600
ttcttgccga	ccctangnaa	tcaccctggg	cgtnttngan	cann		644

&lt;210&gt; 300

&lt;211&gt; 642

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(642)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 300

accttcccaa	ccattagagt	gagtcaccct	agaagcaaat	tctccagctc	cagtgcattc	60
tttagataac	tgccactctg	gtcactatct	tatctacaac	ctcatgagaa	acctcagcca	120
gaaccaccca	gctaagttgc	ctctgaattc	ctgagccaa	gaaactggga	gataatgttt	180
actgtttaag	actttaaatt	tggagtaatt	tgctattcag	ccatagaaag	tgacactcat	240
ttcttcgtgc	ccgacactgc	tgtctctgtg	gtttcacatc	cctgtgggta	aagctctcca	300

agggctcatc	actaatttca	ggataaaatc	taaatccctt	aacatagcat	agggtttttta	360
caaactgcct	cctgtgtgcc	tctcagcccc	atccggccca	ctctgccttt	cctncctgga	420
tcaactccagc	tactctgaaa	catactgnac	cttnctaaat	gcngacagat	aaaattggca	480
gacttttcat	aggatgcccc	gtgaaatttg	aatttcagat	aaccatgaat	aatgngtgtg	540
ggtatacaat	atttgggaca	tcctatacta	aaaatattgc	tgacncatat	tcttcaaggt	600
attaatttta	tctgaaatcn	catttaatan	ggcatnttgg	gc		642

<210> 301  
 <211> 589  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (589)  
 <223> n = A,T,C or G

<400> 301	
cgagggtaccg	tattatgaac taacaaaata tttttgtttt acatcagtct taatagtccc 60
atthttgctca	attgggaata gtgctagctc tcttgtttga gaactgttac ttcaaaaaaa 120
atccaatgca	aggtgctggg aagtcctctt cataacctta attaatattt gttagtgtatt 180
tacagtataaa	ctgctttttag tgaagtatat tcacttggcc cataaacact gaaatagatg 240
aggtaatgat	acattagtaa tgtagtaata aattagtatg ccaattctga caaaaaatta 300
ccaatagctc	ccccacctt cacttacaag agggttcctg gtttgaacct taacataccc 360
tagatataca	tagcaattct gctgatagga aaaccaagtc ttagcacaca gctaataaat 420
gacaaacatg	ggactagaat ttaagtctat actgccatga acctcatgag gaggagccaa 480
attgntaatt	aagttgcact ctagttacca gcactaacan aacacaaacc aataacatgg 540
gtgtgggcta	ttnanaaaaa ataactgggg gaaaacatta cttttntgg 589

<210> 302  
 <211> 577  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (577)  
 <223> n = A,T,C or G

<400> 302	
ggtacttgaa	atggtgctgg ttaaaagttt ttctgcttta ctcatcctt tgacagcatt 60
aatttggtgaa	catttatatt cagttcagct gtatttatgg cacaagatct catttccaaa 120
atggcactaa	ttttccttaa gtgtaacagc actctatttt tagcagtaat tatattttta 180
aaggttaatt	tgtagaacaa atgttttaac tatacttttt ttctactcta tactccccag 240
ttacagtatt	tacaaagggc tgaagtctat ataaaaaaat gatctttggc tgggcatggg 300
ggctcatgcc	tgtaatccca gcactttggg aggtcgaggg aggcggatca cgagggttagg 360
agtttgagac	cagcctgacc aacatgaaga aaccctgtct ctactaaaaa tacaaaatta 420
gccaggcatg	gaggcaggcg cctgtaatcc caactactcg ggaggctgan gcaggagaa 480
tcgcttgaac	ccgggaggcc gaagggtgcc tgagttgaga ntggccattg ccttcagcct 540
gggtgacaaa	cgagtttcaa aaaaaaaaaa acattttt 577

<210> 303  
 <211> 673

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(673)  
<223> n = A,T,C or G

<400> 303  
 ggtacattta gcccatgagc ctggcacaga tccctatcta gacatgaggc cctttagaca 60  
 tgactttggc attgaccagc ctgttgga caa tgggtcgggg aggcagaggg gatgctcaca 120  
 ccagtaattc tcatcccctg aatgcttggg atcacctggg gagagtccac aaaatactgg 180  
 tgcaggggtc ccacctctga tgatgctgag tgggtgggtct ggggtgtggc ccaggcatca 240  
 tgatgtttca ggcccccagg tgacttctta ggcagcccag ctaagcccct agagccttgc 300  
 aatttcccc aaatgacctc agaggggccc atttgaggga aatgcctaac ttcagggggc 360  
 cgtaagaatc ccccaggag catgtgaaat gcagatacca ggcccccccc cagagatgag 420  
 ctgangtggt tcaaggggtg aaagtgcang gatcaagtgt ttttcacaag ctccatacct 480  
 tcaggaaatg gtgttggtgt ttggggcccgt anaaaaacatt cttgagagtc ctggtgnctt 540  
 gtgccttggg gcaccttggg gtgggaatnc caatgggncc ttgncnttga ggaaggatgt 600  
 gccattaacc tggttaaggg aaaccgaaa ccggtttcaa cttgnccttg gccaaccgg 660  
 ggacccttcn aaa 673

<210> 304  
<211> 426  
<212> DNA  
<213> Homo sapiens

<400> 304  
 ggtactgggc tcccatttat ttgaaatgtc caaaataggc aaatttgtag acgaaaagta 60  
 gatcagtggg ttccctgcagc tgaagtgtag gttgaaagt gagcatgact gaatgccctt 120  
 tctaaaacaa gtaaacctat aattcatatt tccttaagaa aataaaaatt ttattaaatc 180  
 aagatttaatt ttaccatgaa gaacacagag ttattattag tgcaagactt tattcatcct 240  
 ctccccagcc aaatcccaag aggatggcca ccttttgaac tttttactgg cagcttactt 300  
 aacctaaagtc agtctcctaa tctagtgtgc tttgaaatgg ggatgtataa gacaaccatt 360  
 tgacacaggt agaaaacttt tactttttta agccattcc cctggtaaac aatatatgta 420  
 cctgcc 426

<210> 305  
<211> 655  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(655)  
<223> n = A,T,C or G

<400> 305  
 ggtacgagat tctgtgtgtc agccagttta cctccagtg tgtcctgaag ggaaacaagc 60  
 ctgatttcca cctagcaatg cccacggagc aggcagaggg cttctacaac agcttcctgg 120  
 agcagctgcg taaaacatac aggccggagc ttauccaaaga tggcaagttt ggggcctaca 180  
 tgcaggtgca cattcagaat gatgggcctg tgaccataga gctggaatcg ccagctcccg 240  
 gcactgctac ctctgaccca aagcagctgt caaagctcga aaaacagcag cagaggaaaag 300

aaaagaccag	agctaagggg	ccttctgaat	caagcaagga	aagaaacact	ccccgaaaag	360
aagaccgcag	tgccagcagc	ggggctgagg	gcgacgtgtc	ctctgaacgg	gagcccgtag	420
ctcaggaggc	agaattcaat	gtgttatcat	tgggcagaac	tggatcctga	aaaattcaag	480
atgctaagca	cctacactac	tttaagaatt	tggaaactgaa	catgaanaag	aagacngaaa	540
ttagaatttg	ggaacctgaa	tagcttttgc	aaaaacaccc	aagggccggg	taatcgtttc	600
tggtggtgct	nnggtggaat	gatncatggg	ccttgccttg	ggncaagggg	cngnt	655

<210> 306  
 <211> 684  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(684)  
 <223> n = A,T,C or G

<400> 306						
cgaggtacaa	cacgcctcca	tgtttcagca	tctacgtcat	gggcttggtt	ctggagtgga	60
ttaaaaacaa	tggaggtgcc	gcggccatgg	agaagcttag	ccccatcaaa	tctcaaacaa	120
tttatgagat	tattgataat	tctcaaggat	tccacgtttg	tccagtggag	ccccaaaata	180
gaagcaagat	gaatattcca	ttccgcattg	gcaatgccaa	aggagatgat	gctttagaaa	240
aaaagatttc	ttgataaagc	tcttgaactc	aatatgttgt	ccttgaaaagg	gcataggtct	300
gtgggaggca	tccggggcctc	tctgtataat	gctgtcacaa	ttgaagacgt	tcagaagctg	360
gccgccttca	tgaaaaaatt	tttgagatg	catcagctat	gaacacatcc	taaccaggga	420
tatactctgt	tcttgaacaa	catacaaagt	ttaaaggtaa	cttgggggat	ggctacccaa	480
aggttaacac	agtatttttc	tcaaatgaac	catgccttat	tgcagaattc	ttcntttttg	540
gaaagaacca	ccggccaaaa	cattccccaa	cttntgtaaa	agctggtggg	gacctaatgg	600
ccgcccctaa	ttctgacttt	gaactggaaa	nccttttaag	naaaacttgg	nggcttttnt	660
aacaaaatcc	cgcgtanttt	gnct				684

<210> 307  
 <211> 647  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(647)  
 <223> n = A,T,C or G

<400> 307						
caggtcttgt	atacacaagc	gtccatgtct	cacacaaata	ttgatgtgat	tattcttaag	60
tgttaaatca	ttaaacttta	aatgacttca	ttgggaatat	tgagcagagg	gactgtgctt	120
ctatgcactg	ggcaaggcag	tatttgctta	ggaaactaat	ttagtcatca	gagatacttt	180
cctaaaaagg	aaaaataaaa	aacaaaatgg	tgccactttg	ggttgaagct	actttgtag	240
gcttgaattc	atttatatgt	cttttgattc	ttaaaaaac	aaaaaacatt	ccattagaag	300
caccagtttt	tttgctcaga	ctttgtggat	cagactctac	actcaacaca	ctctaatact	360
cttaaaggta	tacaaaatat	gctgatcttt	tttaaattat	gatttcctga	atttttttct	420
taagtcgtct	caactgattt	actcacttag	cttcctttcc	tcatcaccta	gtataataga	480
atgnatgtta	catttttatg	atgggcagg	gtcattataa	tctgnattga	cttaaaaagg	540
ttcttctctc	tgatgcta	angtttttgg	atanttgga	ggatacncat	ttgacagttt	600
tgcattttat	gnatgagc	gtatccatga	cggggcacgg	attatag		647

<210> 308  
 <211> 660  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(660)  
 <223> n = A,T,C or G

```

<400> 308
acctttgttg ctataaacca gatggagact gtggtgctat tttgtatfff ttttttaatg      60
gaaggggtgtt ggggtggcag tttttatcct tgaagacctc agatatgcta agtcaacctt      120
agcaaagtat actcgggtgga accctagctc tgtgggggtga tctgcaaaat agagtatcct      180
ggtcatgtaa gttcaggaaa tgctacagac tcaaggatta tttttgggga ttcaccatgc      240
acagcacaca ttgaaggctg aaaagtcctt gcagaaagga aactgactta actttgtttc      300
ttaaggatat ttgaccacaa aacccttagt ctgcatcaca ccaacctgat gcctnctgga      360
acctgtgttc tgtanaattgc gtattagaaa atgttggaaca acctgtttca ttatcagaag      420
tcccattttct gangacagtg gtctctgnct ggaaaataaan ggtccagaat ctcaanttcc      480
agggaccagn caaggtctgg cacttntanc cagtaaaacc ccattgcata aatcttcatt      540
ccatcaaggg tataanttgc ttgngccctt tnacaaangg ggaaanaact cggaanaaag      600
gtnccttggg ccggaacac ccttaagggc caaattccan acaattgnng gccgtaatna      660
  
```

<210> 309  
 <211> 401  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(401)  
 <223> n = A,T,C or G

```

<400> 309
ggtacacata tacacataac aagtgtagaa gtatatatta catacataca ctcactctgt      60
ctgggtatagg ctaattttga agaactccca taagtttctg ctgcttctcc cataactgct      120
gccaccacca tcagaattca taatcaaacc taaccttttt gtttggggca ccaaactctga      180
agacaaaatt aatttgcacc agtaaaacttc aagctgcttt ctttcttgaa aactaaacgt      240
ttaacgtata atgtctgttt ggatactgtt ccaaattggt gattgcatgt ggттаатgtt      300
gcattagagc actttgcaat tgcataattc attaattggt tgtgagcttg catttgtgag      360
ttattggatg atcagactga attttgcaag tatcacattg n                                401
  
```

<210> 310  
 <211> 502  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(502)  
 <223> n = A,T,C or G

```

<400> 310
acatgtttat ggggactcct aacacagggc tcccctcttt ttcactagga gtttcactta      60
cagctgacaa tctatggggg cggggggggg gcgcggcaaa aaagcaatga tggaccttgg      120
ctaatacccc cgaccctttt cttaacaata taggtagatg tctatcgtca gcttgccctct      180
ttgccaagac ctaggaggcg gctctgccat gagctgctgt gtgctgccct cccacacctc      240
agcacactca tctacacaca cacaggtagc acccacctcg atgagaccgc cttgctctgg      300
cctgccccaa ccctggaagt tgaaaacata gagccattta tttctgcttc tactctctgn      360
gccccatgtc tgtccacgaa actttgctga acttccagga ccttacacct gaagccccac      420
aataacctgg atgttttgaa agccctngga aanccagttt taganaaagg acccccttaa      480
gccgaaacag ggcctgttaa aa                                     502

```

```

<210> 311
<211> 387
<212> DNA
<213> Homo sapiens

```

```

<400> 311
cgaggtaact tactcagagg ggctttgatt tttttcaagc acaaagcaag aagttccctg      60
gattctaaag cacactgtat ccaagttcct ggtggttgaa aatacctttg acattgtttg      120
cagaacgaaa tcgagacttg tttcggaata ccttggctga tgtccacttt acttcgcaaa      180
caggccacac aaatattggc aggatttgga cttatcgga caccacactc acagcacaag      240
atgtgtccag ggctgcggtc ggtggattct gccatatact ccacgttct gtatgcctta      300
agttttccgc cctccagacc agccctggat ttgctgaaaa cccgcaacaa aatagacccc      360
ggctgtcccg tcagctgcca acctgg                                     387

```

```

<210> 312
<211> 654
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1) ... (654)
<223> n = A,T,C or G

```

```

<400> 312
ggtacaaaaa aatgcttctg gagatttctt tggcagaaat gcctttcatc tataatttca      60
tggagaactg ctttaattag cctaggtgaa aagtagtctt agcagtgtaa atatgtataa      120
ttagagtttt ctaatttcac tgtgagatct ctaacttttg agtggcaaac agatcaagtc      180
ttttgctcat agacttttct gtgggggtat taaaatgcaa aagctttatt ttttttaata      240
atgccatact ccattagtgt cagatgatgg tatggaattt gttcccttgc tttccccac      300
tgttactgct tcagtttata gactgccagc agagttcaga aatagagcag ggatttacct      360
gttctttgct tggacatccc attttctttt gccagaccga tggtaggcaat catgtatgaa      420
ctgngttata cttctcagtg ctttcttttt tctttttgat aagatggata tcaaaaatag      480
ttgctgtgcc aaaagtagta agccttcttc aagaagaaaa cccaatcttt ttctaataat      540
aatcctgnga aaatgcttca ttcattcatt taatttttaa gccaaagggt accaaangct      600
gntgntttta actangaaat ttgaaatggn agnnttaaag cnttttaaaa aaag          654

```

```

<210> 313
<211> 656
<212> DNA
<213> Homo sapiens

```

<220>  
 <221> misc\_feature  
 <222> (1)...(656)  
 <223> n = A,T,C or G

<400> 313  
 acagttctgt cctggcatca tcattcattg tagtatggtc aatagggtgcc atgaaactca 60  
 gtagcttgct aaggacatga aaccgaagtt tcctgccttt gctggctttc ctatctactt 120  
 ttttgtggat tttgcttcgt aacttctgga ttgcaagcca ctgccttccc atggccacct 180  
 gatcgttggg atccaaggag ctgggtcttcc gttctatgag ttctcgaagg agctgggtgg 240  
 aaaagtcata atcatcaaa atttcttcat ccaagtcctt cagatgagca ttagcagggg 300  
 cttgaggaag gatctccggg tcccttggca aactctctgg gacaggctga gctgctggct 360  
 cagggtttgcc aagaactcga tagacagagc gcttgggtctg tgccttcga agtaatctct 420  
 ctttgnccat cagaatatgg tcgatctgag tcaaagattg aaccgttcaa angcaccaaa 480  
 acccttcccc agtttttcag aaaccaggtt tgggtcttatc gggccatttc tgaantgtgc 540  
 cggttcctgn aaactggtaa agtcggcaaa acgctttgcc atgaacttgg aatagnctc 600  
 catntccggg tnccttttgc anggacctt ntttgggtggg tgggtctttt tttttn 656

<210> 314  
 <211> 649  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(649)  
 <223> n = A,T,C or G

<400> 314  
 ggtacatgga ctggacctgc ctggagccca gccagagca tctcctcagt gctcatctct 60  
 atccagtcct tgatgactga gaacccctat cacaatgagc ccggctttga acaggagaga 120  
 catccaggag acagcaaaaa ctataatgaa tgtatccggc acgagaccat cagagttgca 180  
 gtctgtgaca tgatggaagg aaagtgtccc tgtcctgaac ccctacgagg ggtgatggag 240  
 aagtcctttc tggagtatta cgacttctat gaggtggcct gcaaagatcg cctgcacctt 300  
 caaggccaaa ctatgcagga cccttttggg gagaagcggg gccactttga ctaccagtcc 360  
 ctcttgatgc gcctgggact gatacgtcaa gaaagtgtcg gagaggctcc ataagagaa 420  
 tgcagaaatg gactctgata gcagttcatc tgggacagag acagaccttc atgggagcct 480  
 ganggttttag accctgggtc atctcccttc cccacttaag aagtccagca gaatcctttc 540  
 cccanccan ggatgganan gcctgggnat ctccttccan aattgaagtc atcttgcaag 600  
 aaggcaagaa ccaagcagct tcgantccan ggtgtggaat gggggcctn 649

<210> 315  
 <211> 238  
 <212> DNA  
 <213> Homo sapiens

<400> 315  
 acctgcaggg ggtggcagcg ggtagccggg actcgggcgc cgcgctctac gtcttctccg 60  
 agttcaaccg gtatctcttc aactgtggag aaggcggtca gagactcatg caggagcaca 120  
 agttaaaggg tgctcgctg gacaacatat tcctgacacg aatgcactgg tctaagtgtg 180  
 ggggcttaag tggaatgatt cttactttaa aggaaaccgg gcttccaaag tgtgtacc 238

<210> 316



<211> 637  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(637)  
 <223> n = A,T,C or G

<400> 316

ggtactgtgt	ttacatggtg	agtggtcggt	accatccaac	agcacaaggc	acaaaaaatg	60
ggcatcaagc	aaaccatgca	taacgaggcc	tggaaaccat	caagaacagc	cacaaaagag	120
gtcactcaga	cctctgattc	aaacttctgg	tgtttgagtg	acaagcatgc	acgttttaggc	180
tctgccc aaa	tatcagggag	gatttccaat	ctccacaaga	gactgggttc	acatatggcc	240
tttctcctgg	ctgtcaaacc	accaggggttc	ctccaaaaca	aaatgagagc	agctgttttg	300
ctgatcaacc	aatcacacta	gcagttctat	ttcagtttaa	aacaaccttg	caggaataaa	360
ccacataaag	actccgtggc	taagggtcgc	tattacttac	acctaccaag	cgaacacaaa	420
cggctggctc	ttctatggta	acgcttcact	ggcatgcaaa	ccccaaagggc	cactgaatgg	480
aatgaatcca	catgaacagc	atacctggag	caggaacatg	ccttcacaag	aagtgtcagg	540
agactaacct	gtggttgcta	acattnttgt	gangaaaanc	agggtagcag	aaggggtgggt	600
tgaagtnttg	cctaatatnc	ttaccatata	tataaac			637

<210> 317  
 <211> 505  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(505)  
 <223> n = A,T,C or G

<400> 317

ggtacattgg	ccagactcat	gcacaccaca	tctgctgaca	tctccttcgg	ttctgtgtac	60
tcattcagct	gtcctgaagg	atccatctcg	aaatagacca	gctctcctcc	tgtcagggca	120
atcaccactt	gtcgtgggtt	cactgcacac	ttcacaattg	ttttctttcc	aggggtcttc	180
cactcattga	ctctcttgct	tgctcgtatg	tgccgaatgc	catctggata	gacctgcacc	240
aaggcatcat	ctcctaataa	ggagcaggac	aaggtcgggg	tggtccccag	gaacccagag	300
tcagtcactt	cttctacagt	ttctccaatg	gacaacacta	gggtggcatt	cacgaaagac	360
acaatgatgt	aggcatcaaa	ctcatcttca	atgtgtcgac	gcactgtcca	nacagcgttg	420
gggttaccag	gtanctcana	aacagccatt	tctgacacct	naagtccatg	gtttaaggac	480
ttttaaanat	gatcngggnc	ccctn				505

<210> 318  
 <211> 645  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(645)  
 <223> n = A,T,C or G

```

<400> 318
gcggtgctcgcg gccgaggtac atacaaactg gggttctgtc aatgacaaca aggactatgt      60
gttggttcat atcaaattcca agaataattag acaaccaaac atataacctt cttgtgggtt      120
ctcttaatat gcagcattca ttatggtagt taggtccctt cactgggttt ctgcaagtct      180
gaagttgtgt ttcttgtgtc gttgcccgcg tctccacctt cagagctgct tttgttttcc      240
tcttctttgc agtctttgtc atcttcatct cctggagatt tccgggactg ttttagaggat      300
ttctttgaag tatatgactt ttcccgtttt gagcctgctt ttccattctt tcttttgcct      360
tttccatctt cttctactct atcaccttct tccctactgc ttgcatctgc agtatttcca      420
ccttctcttc agtttctgaa gancctctgt gctgaattct ctggtaccag taaactttac      480
tntcgggtat ttcttatttc cacaatcctt cgttaaattc tttccggttg ttgacttttc      540
aaactggcnt tggacctggc ccggccggcc gtcgaaaggg gaattccacc attggcggcc      600
gtactaatgg atcnacttgg ncccacctgg cgtaatatgg catan                      645

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<210> 319

<211> 424

<212> DNA

<213> Homo sapiens

```

<400> 319
acttttccat aaagttctag tcacttctgt tggcctgagc caccagatta tgatgttgcc      60
agaattcact caatttgaat aaagatgaac agtatttggt ttcttggttc catgaattat      120
atcagtattc taaaacatcg cttcagaaag agaactgttt atttctgcag gcttcctgtc      180
cttttgtggt atggtttttt ggcttattt tcaactggctt ttcttctcc aaactttgag      240
gcggtgatttc attcattgaa gaatcaatac atattttggt tcaaaatggt tgaaacaaaa      300
gacatagatg gtagactttt attaaaacat atatggatgt ggaaagcaca tatattaatg      360
cagtcattccc ttttcaggtg ggaagagagc aaaccagttg attttttaat tcatccttag      420
tacc

```

<210> 320

<211> 472

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1) ... (472)

<223> n = A,T,C or G

```

<400> 320
acgaagtccg gcaacaagaa agcgaggagc agcgtgtatg cccttatcct cagcaagtga      60
gaacaaggca gatcacagca ccgacacaga agatggcctt ctcccatgtg ccagcggaga      120
atcccccttc agccaaatcc tcaggaagca gagcaccaca caagcagcat ttcttggttt      180
ctcatggtca tattcaaaaag cgacttttaa atcagaaaat agaaaaagca tttgtggtag      240
gtctttttca aaccagaaac acaagttggc taggaaaacg gaaagcttcc tctggcatcc      300
ctgtttggaac tcctcctcct cttggaggag ttctctgaac cgcacacaca tcgcttcctc      360
accaagagag atgctcaact aggatctttt ttagtgtgcc agttacaaga cacatttaca      420
ggctatgttt ctaagacctc ttagtggcca acgangaagg aggttacctt cg                      472

```

<210> 321

<211> 588

<212> DNA

<213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(588)  
 <223> n = A,T,C or G

```

<400> 321
acctacctca caggtttgtt gtgaagacta aatgaagata atgcaataaa cggctgagac      60
ccatgccaaag cacatggtaa aagtgtgtaa ttgcgtatta gcagcagcag ccagagcaat      120
agccaagggt caattaactc ccagtcaggt gttcagttca tgattgtcca tgcattaaga      180
gccaaagcac ccccaaagcc atctcaccct gctgaagcag tctaaagtgc tcaactaagt      240
tggtgcatta atctctagac cagaggtcag cagacgtttt ctgtaaaggg ccagacagca      300
aacatttttag gtctctgttg caactactca gctttgccct tgtgaatgaa agcagcaaga      360
caatatgtaa atgaatgggc cgtggcagat ttcattccaca ggggttccct gcttttagact      420
gtgccgagag ccatangtct tgagttnaag tccaacctta ccacacttgc aanggggtggt      480
ctttgaccaa gtcnnggaag gnntnccaaa agtcaaggcc cttaancctt taaaaaatgg      540
ggaataataa tgccttcctt caagagctgg tnaaacaatg gaagctgg      588

```

<210> 322  
 <211> 589  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(589)  
 <223> n = A,T,C or G

```

<400> 322
acagctaatt gaaagtatat aaaaatgtga attagtgtgg ttgcagctaa aagtatgagt      60
gatgtaacaa gaatgacgac gtaatgagtc aagtgggtgag actagttcta taagcaccgt      120
aaggagtgcc agtcctaata catgaacttc atccatccct tgtatatcaa ggaggagact      180
gtggtcagag aatgtatttt gtaagctata gtttaaaaaa attactcttc agaaatttgg      240
agcccaaagca ggaattacag agattcctcc caacagaggg cctgagatct cccctgactg      300
ccacccaaag gatccacact tgccctctgat caaccagatt caggccaagg cttanaagag      360
ggaggaggca gtggccagaa gccagggact ctagaggaga gaaatgatgg cagatgtggg      420
gttcagaaaa aacacaagac gggaaagggg aagaagggga aaaaaaggaa gaaccaccac      480
tggtgangaa attgttnaan aaggccacnt ttgcttgang agtggccctt gnccttttca      540
ccttgccctgt gggcaaangc tggcaagtaa agacaagggc ttaaccctn      589

```

<210> 323  
 <211> 582  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(582)  
 <223> n = A,T,C or G

```

<400> 323
actgcttatg taaatcgttt atttttatct catcaaagcc tggcaagtat atgcattcca      60
atttaccatt ggcaaagcct tattttatct taagggttga tggtgaatta attttgtggg      120
aaaatgagat ttgtaagtag ttttctttct agataagata acataaacca agctttcaga      180

```

agttaaggat	gatgaataat	attgaaatga	cttggtatat	attgtaaggg	ttcccttaag	240
tatcataatt	aacaatttgt	ggaaattgaa	aaagcataaa	ctgtgttatt	tgattaagta	300
atatgttccc	ttaaaattca	ttttgagggtg	tatgtttatac	acacagtaaa	tttttgttca	360
ggaatgactt	gctcattctg	tgttttttaa	aataggaaat	aaggcatagt	gagtcacat	420
tacatcaatt	aaccnaaaaa	atatttcatn	ccctccgtca	ctggaaatta	tctacttcag	480
ncacctttct	taatcctcgt	gttagggagg	ccccgtttat	gggccttttt	taatttccat	540
gngccatatt	gtccactacc	cggcagtagc	ccaaagctan	ct		582

&lt;210&gt; 324

&lt;211&gt; 180

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 324

acccgtcggc	ggcaccacc	aacaaccgcg	ggatcttctg	aattgtggct	agcgagcaga	60
tgtttttgtg	gccgcagaat	ggcaggcgga	ccgtggcgaa	ggctctgccc	tggttgaaca	120
tttctgtcac	ttgggaaggc	aggtagctgg	tggaggccat	gagcactttc	ccgaagtacc	180

&lt;210&gt; 325

&lt;211&gt; 575

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(575)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 325

ggtacaaata	ctgggaaaaa	cctgctcttc	tgcgttaagt	gggagacaat	gtcacaagtt	60
aaaagctctt	attcctatga	tgccccctcg	gatttcatca	atttttcatc	cttggatgat	120
gaaggagata	ctcaaaacat	agattcatgg	tttgaggaga	aggccaattt	ggagaataag	180
ttactgggga	agaatggaac	tgaggggctt	tttcagggca	aaactccttt	gagaaaggct	240
aatcttcagc	aagctattgt	cacacctttg	aaaccagttg	acaacactta	ctacaaagag	300
gcagaaaaag	aaaatcttgt	ggaacaatcc	attccatcaa	atgcttggtc	ttccctggaa	360
gttgaggcag	ccatatcaag	aaaaactcca	gcccagcctc	agagaagatc	tcttaggctt	420
tctgctcaga	aggatttgga	acagaaagaa	aagcatcatg	taaaaatgaa	agcccanaga	480
tgtgccactc	ctgtaatcat	cgatgaaatt	ctaccctcta	agaaaatgaa	agtttctaac	540
acnaaaagaa	ccngangaag	aagcatgctc	atcaa			575

&lt;210&gt; 326

&lt;211&gt; 584

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(584)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 326

accagcaatc	ttagttacaa	aataatactt	ttcagtagtc	tttcttgatg	cacattttaa	60
aaccagcaca	actcctctag	tgaaatggtc	aatttccctt	aaaaaacaac	atctgaaatt	120

ataagacctg	acaaatcata	ttatatattca	atatttagact	gctgtggctc	tagaacaaca	180
gaaaagcgtg	actttcaaac	agcttaggga	aaaagcactg	aaatgtagat	gtcgtcaatc	240
agcctcaggc	attattgatc	ctgtgccatc	cacacaccct	taagggtttt	cacagcactc	300
tgacggtatt	atgtgtgttt	tgcaaatgac	gaatcaacag	tatgctgaat	aatcagcaat	360
gaaacacagg	agataaaatta	aatgtgtttt	tccaaatgtc	agaatatcga	ggttcccagg	420
agttggcaaa	acttctcaag	gtgggccatt	cagactcang	ctgtgcnagg	ataagggttc	480
cttaccgtan	gtgaaccggg	tgagaatat	ggttccncac	acccnagaag	ccatttaggc	540
atatactggg	caaaaaagaa	acctgaatnn	aatgggacca	atnt		584

&lt;210&gt; 327

&lt;211&gt; 573

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 327

ggtacctctc	tgaagcacac	agaagtagcg	ccaggcagag	ggtttgaagg	atatgtattc	60
atcaagaagt	aaacgcaaat	ccaagatctc	aaccacactt	ggctcttaaa	gatccaccaa	120
cttaaccctt	atggcatgca	tatgtgactt	ctgcaagaag	caacttgaaa	acccaagaat	180
gccttgctct	accacgtccc	gcgactgcaa	actcccttcc	tctgaaacaa	gcagccacag	240
ctttataaga	aacatgccgg	catgtagtcc	atcctgggag	gggagaaatc	ttcaccactg	300
gctgcctttc	agcaagttcc	ccttgaaatc	tgccggcagt	ggaacagatc	ccagatccca	360
acgctgtagc	ttgggcgtcc	tcccaccagg	ggttccttgt	tctgaaagct	gccaccagtg	420
ttgttccgaa	agatgcctct	gcctttgtgg	ggtcattctt	cattatgcct	cctaacagga	480
aacaggcttc	tatggaagag	aagagtccca	gccccctgac	ctttccgctt	tggtcttgga	540
ggatctgagt	cacatctgcc	atgttgcccta	aag			573

&lt;210&gt; 328

&lt;211&gt; 422

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(422)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 328

ggtactat	tgaagcgctg	gaagaagaac	tggtttgatc	tgtggtcgga	tggtcacctg	60
atctattatg	atgaccagac	tcggcagaat	atcaaggata	aggtccacat	gccaatggac	120
tgcatcaaca	tccgcacggg	gcaggaaatg	cgggatactc	agcccccgga	tggaagtgca	180
aaagactgca	tgctccagat	tgtttgtcga	gatgggaaaa	caattagtct	ttgtgcagaa	240
agcacagatg	attgcttgcc	ctgyaaaatt	acactccaag	attctaggac	aaacacagcg	300
tatgtgggct	ctgcagtcac	gaccgatgag	acatccgtgg	tttcctcacc	tccaccatac	360
acggnctatg	ctgcaccggc	ccctgagcag	gcttatggct	atgggccata	cggtgggtgcc	420
gt						422

&lt;210&gt; 329

&lt;211&gt; 467

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(467)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 329

ggtaccacta	tccccacttt	acagatgagg	aaaaaacagg	ctcaagagtg	aagtccctcg	60
cttgcttagt	atctcaaagc	taagctgcaa	gcaaagatgg	ggctccaagg	tctgtgtgac	120
ctgagctctt	ggttatccaa	tacttcaaaa	ctgtcactta	ggaaagaaga	gaacattttt	180
agaaatagga	gaaaacccaa	cagccacagt	gattgtcaaa	gagctgaggg	ggcatcagac	240
caggttcggg	ggcaccagac	caggttcagg	gccactgctg	aactgccaat	gccctgcccc	300
gccccaggag	acacgcagac	tccactgccc	tagacgagtg	gccctgctgt	taataaataa	360
ataaagggtca	ggcacaatcc	tacacaaagg	ccccagaatt	caaaccactg	tcttgnttct	420
cagacttttg	cttaagagcc	nagtacctgc	ccggggccggn	cgctcga		467

&lt;210&gt; 330

&lt;211&gt; 595

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(595)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 330

tcgagcggcc	cccgggcagg	tacatggccg	ccgtcctgga	atacctgaca	gcggagattc	60
tggagctggc	tggcaatgca	gcgagagaca	acaagaaggg	acgggtcaca	ccccggcaca	120
tcctgctggc	tgtggccaat	gatgaagagc	tgaatcagct	gctaaaagga	gtcaccatag	180
ccagtggggg	tgtgttacct	aacatccacc	ccgagttgct	agcgaagaag	cggggatcca	240
aaggaaagtt	ggaagccatc	atcacaccac	ccccagccaa	aaaggccaag	tctccatccc	300
agaagaagcc	tgtatctaaa	aaagcaggag	gcaagaaagg	ggcccggaaa	tccaagaaga	360
ggcaggggtga	agtcagtaag	gcagccagcg	ccgacagcac	aaccgagggc	acacctgccg	420
acggcttcac	agtcctnttc	accaagagcc	tcttntcttg	ccagaagctg	aaccttatta	480
cagggaaatc	attaattagc	cggctttgaa	ggtggaggcc	taaatcatcc	taccaatgct	540
gcattgacct	taaagatgac	ctaggaacac	gctggagaaa	aaangtggnn	aggat	595

&lt;210&gt; 331

&lt;211&gt; 421

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(421)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 331

acccaaaaac	caccccccaac	gccccccaac	cctcaggcgt	gcctgtgagt	gtgtctgtgt	60
gtctcactct	gactcaccca	gacaactgac	ttcagcagcc	aaccttggtc	attcccagaa	120
ccaccactgg	ggggcatatc	tgtggctaga	ctgggggcgc	ccgaatatct	gtctctacaa	180
aaaaaaaaaa	aaaaattaat	gggggtgtgt	ggtggtgctg	gcctgtggtg	tcagctgctt	240
ggggcgctgg	ggcaggagga	tracctgagc	ccgagaattc	aaggctacag	tgagttaaga	300
ttacgccact	gcactccatc	ctgggtgaca	gagcaagacc	ttgtctcaag	aaaaaatttt	360
tcaatgagaa	aaaaaaaaann	aaaanaaaaa	aaaaaagctt	gtacctcggc	cgngaccacg	420

C

421

<210> 332  
 <211> 616  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(616)  
 <223> n = A,T,C or G

<400> 332  
 cgagggtacca ggctacatat ctcggtcagt agctggatcc ttgataatg aaggcattgc 60  
 tatttttgca cttcagttca cataactattt atgggtaaaa tctgtaaaaa ctgggtcagt 120  
 tttttggaca atgtgctgct gcttatccta tttctatatg gtctctgctt ggggtggtta 180  
 tgtatttatc atcaatctta ttccactgca tgtattttgt ttgttactga tgcagagata 240  
 cagcaaaaaga gtctacatag catatagcac tttctacatt gtgggttttaa tattatcaat 300  
 gcagatacct tttgtgggat tccagccaat cagaacaag gaacacatgg cagcttgcaag 360  
 gtgctttgca ttgctgcaag cttaancttt cttgcagtat ctgagaaccg attaccaaac 420  
 caagagttcc agaccctttc nttttggggg atactacttc agngctgggt cctanggcac 480  
 tattgntatc nggtacattg cccctggatg gcngttantc ntgggaaccg ggatncaaaa 540  
 ccctccata tgctangnt gncctaacct acaatngggg cttttttgac aaaaanntgg 600  
 atnctccgg ggcn

<210> 333  
 <211> 650  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(650)  
 <223> n = A,T,C or G

<400> 333  
 ggtgggagag ctaagtctgc attattttttt ggaatcatta attaatttgc aatcacagag 60  
 tcttcaggaa aaaggcaagt tatcagctga agaaaatccc gatgactctg aagttccatc 120  
 atcatcagga attaaactcta ccaaatecca agacaaagat gtcaatgaag gagaaacatc 180  
 agatggagtg aggaagtcag ttcacaaggt ctttgcttcc atgcttgagg agaatgaaga 240  
 tgatgaggag gaagaggaag aagaggagga ggaggaggag gaggaagaaa cacctgagca 300  
 acccactgcg ggcgatgtat ttgtattgga gatgggttctc aatcgtgaaa ccaagaaaat 360  
 gatgaaagag aaaaggcctc ggagtaaaact tcccagagct ctgagaggtt tnatgggtta 420  
 ancctcnntt cgttttgnnt gaagagaacg tggngaggcn aatnttgngt gcctgggaat 480  
 nataaaaaaca gctcttttgg cttatggcca tcttacttta ncctgatttt agggccnagg 540  
 ngcctngaaa atcntgcent tgagtgatgc tggccttnaa tcccngggcc cnaaaaaggg 600  
 ttactggcn aatttttggg nagcctttta ancgggtttt ttgnttcaan 650

<210> 334  
 <211> 734  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(734)  
 <223> n = A,T,C or G

<400> 334  
 tgntatctga gaattcgccct ttcgagcggc gccgggcagg tacagattaa cttaacacaa 60  
 aaacccgaac ttcaaaatga aggtgtgtgg aggaaagggtg ctgctgggtc tccctacaac 120  
 tgttcatttc tttgtggggc agggggtagt tcctgaatgg ctgtgggtcca atgactaatg 180  
 taaaacaaaa acagaaacaa aaaaaacaag gaactgtcat ttccacgaaa gcacagcggc 240  
 agtgattcta gcaggcctca gggccctggg cctggggagg ctacatgagg gggagcctca 300  
 gtcacaggat caacctgggg ccgaaggag caggggtccc tgccctctccc tctgcaacag 360  
 atcatcccat ccaacacaac ccccaaaatg ttgatgatga cgcaacatgg tcaaccctna 420  
 agacctttta gaccaaacag agcagcatag gaaaaaaaaa accaaacgca ccaatttctg 480  
 catgtgtcaa tggtagggca ccatttttnaa aaagtgtggc ttaaacaagc tggctttact 540  
 tgganggacc taatnccaag cttaattcct ttggtaangg aaaaaaccct tgaaccccn 600  
 tctnagctta aantcttaag gttaagtcn aaccanttaa aacnttctgg gttncctct 660  
 tccaagnttn aagccccctt tccctnaac ctggggattg qgggnaattn accnggncnt 720  
 ttaaatttcc gngg 734

<210> 335  
 <211> 492  
 <212> DNA  
 <213> Homo sapiens

<400> 335  
 acatccttca ccaccatgga atatttttagt ctatgtagtc aaagtcttct ggaattccaa 60  
 aagttctatc aattttatct tcttcaaacc caaattttct tttggcccaa gattttattg 120  
 cgaatatgtt atgtatttct tccacaactt gcggatcaca gtctttgtat ttttctactt 180  
 ctgccttttag ctgttccctt tggctctgaa gtgaagaaag ctcttttgct agcctgggtc 240  
 gctcttccgt ttcacatcgg ccaatttttag ctttctcaat gcttttctgt aggcttgc 300  
 gcttttgact tccctcagac aactgagatt ccagaacctc caacttatgt ttccttgc 360  
 gaagagcttt acttggaaaa gcccaataat aattagaagt tccgatcctc tcacagtcaa 420  
 ccataccatc atcaactaag ctttgaagga cttcttttac tgacatagca gtaatgcctt 480  
 tctctttggg gg 492

<210> 336  
 <211> 732  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(732)  
 <223> n = A,T,C or G

<400> 336  
 ggtacatata aatgaatctg gtgttgggga aaccttcac tgaacccac agatgtctct 60  
 ggggcagatc cccactgtcc taccagtgc cctagcccag actctgagct gctcaccgga 120  
 gtcattggga aggaaaagtg gaaatggc aagtctagag tctcagaaac tccccgggg 180  
 gtttcacctg gggcctggag gaattcagct cagcttcttc ctagggtcaa gccccccaca 240  
 ccttttcccc aaccacagag aacaagagtt gtctctgttc tgggggacag agaaggcgct 300  
 tccaacttca tactggcagg agggtagga ggttcactga gcttcccaga tctccactgc 360



ggggagacag	aagcctggac	ttttgccc	cctgtggccc	tggaggggtcc	cgggttgtca	420
attcttgggtg	ctcttgnngt	tccagaagca	agccgggaagt	ttgaaagaaa	gggaaccttg	480
ggaatnaagg	ggtgcttggg	tattaanccn	naaaagggat	tggggttcct	gnttccaang	540
ggancctttt	ggcctttctt	tttggncctt	tncttaaggc	cccagggcct	nggggtttgg	600
accttngccc	cggngggccc	aagggggcna	aattcccacc	ncanttgggg	ggcccgggtac	660
ttaangggga	atcccaactt	tgggncccca	aactttnggg	gnaaanctn	gggccaaaac	720
tggtttcctn	gg					732

<210> 337  
 <211> 642  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(642)  
 <223> n = A,T,C or G

<400> 337						
ggtacaacag	tagaagaagc	aacaacaata	gtaaagccac	aggaaattat	gttggacaat	60
atagaagacc	cttctcagga	ggatctttgc	agtgttgtcc	aatctggaga	aagtgaggag	120
gaagaggaac	aagataccct	tgaactggag	ctagttttgg	aaaggaaaaa	agcagagttg	180
cgagccttgg	aggaaggaga	tggtagtgtg	tcagggtcta	gtccacgttc	tgatatacgc	240
cagccagcat	ctcaagatgg	aatgcgtagg	cttatgtcta	aaagaggaaa	atggaagatg	300
tttgttcgag	ctaccagtcc	agaatctacc	agtaggagtt	ctagtaaaac	tggacgaaga	360
tctccagaaa	atggagaaac	tgcaattggt	gctgaaaaat	tcagaaaaaa	tagatgagaa	420
ttcagataag	agatggaagt	agaagaatct	tcagagaaat	taaagtcctg	ccnggccgnc	480
gttcnaangg	cnaattncac	acctggcggc	cgtctagtgg	attccacttg	gtcccaactt	540
gcgnatctgg	gatactggtt	cttggnga	tgtntccgtt	acaatcnenc	acttcaancc	600
ggagcttaan	gtaaacttgg	ggcntannag	tgctnactcc	tt		642

<210> 338  
 <211> 723  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(723)  
 <223> n = A,T,C or G

<400> 338						
acataaacac	acgcatatca	caagtctagt	caagaaagaa	atacatagaa	aaacaagata	60
gaatttttaa	aataatttgc	aaggggaagt	ctcaatgctt	cagttctaaa	atattgtctt	120
cttttagaaa	aatttaagac	tggaataaca	gattgttttt	cctgcaatgc	tgtaattact	180
gcaaatttat	cagcaaagag	gtaaacagca	atgcaatttt	tccttaagct	tgaatacata	240
aggaacaat	aaagaaacct	gattagacct	gaactaatta	aaagtcacac	cagtaatttt	300
caggccagct	ctggtctcca	ggtagaattc	caggacaggt	ttgnatcact	gggtccattc	360
ccaacaggct	ggataggaga	gtctggagta	attataagga	taccaccttc	ttctatcctg	420
ggctgccgac	tggcattggg	cttcacattc	ccagaatacc	ttctgngnga	ataggccctt	480
ttcaggggga	ccnggaagga	aggaaaaagg	gggcntnggn	aaacatnggg	ggattctttg	540
gnaaaatttc	tggcctggaa	tngtggcnaa	cctttggggc	ttggggntn	ggaaaatgtc	600
caaggganct	ttaangggnc	ccttngaact	cggagggnaa	aatttaaccc	ctangggccc	660

ttgggttnaa aaagggtcttt atttggggga cccgggttnc ccttgnaaaa aatgccncca 720  
ann 723

<210> 339  
<211> 356  
<212> DNA  
<213> Homo sapiens

<400> 339  
acaatagtgt aaagggtggtt tttaaaaaca tagccagggtg tgggtggcacg tgccttttagt 60  
tccagctact caggaggcta aggcaggagg attgcttgag cccaggctgt gtgggtcacc 120  
ataattgtgt ttgtgactag ctactgcact ccaacctggg caacatagtg ggacttcac 180  
tctaaaaaca aacaaaaaca aattacactt aagcactatt gtttaatttt taattgtcag 240  
tttatcatta ttttgggtaa gacattctgg ggtttcttga atcttgtcca aaaaccagtt 300  
gttttggaaa attgctttta attgagcata tttatgtata ttggataaaa atgtcc 356

<210> 340  
<211> 502  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1) ... (502)  
<223> n = A, T, C or G

<400> 340  
caggtacaat taactgtcac acagtcagat ataattcact ctgatgaggc cagagaaaga 60  
aaacaaggca aagaaagggc tcatcttgct cctttaggta atatccaaat atcccagcac 120  
ggaaaccatc ttttcctcaa aggttatcta cacacgtggc ctgagaagaa aggcagtaag 180  
cctttgggga gttggggaga aggaaggaaa agaaaacagg aggaggaaaa aggaagacct 240  
cttttctgaa ccacaaatgc ctcatgctgc gcactccaag ctgaaatata gtatggtagg 300  
tattctaagg gggaaaaaaa caactacatt tctttcctat tactgattcc tctctgcttc 360  
acagaccag ctgggccaag tggaaaacgg ctgccatgag ttctgcagaa gctgcatgtc 420  
ttgccctggc agtctgaagg tgaagcangc ttcanagggt gacagctcaa ggagaattcc 480  
cagaggncnc cnaaaagccc cc 502

<210> 341  
<211> 243  
<212> DNA  
<213> Homo sapiens

<400> 341  
acatcatcac cttcttggtc aagttttcca tccaacttaa ttttaggatt ctccggacaa 60  
tcaacatttt cactgctttc tgctgcaatt ttctgttttg gattttcagt cacctcgttt 120  
tgggcttcca ctgctgactt tctgtcagta gactttacct gctcttcttc cttaatttca 180  
cttaaactctg tgttctgata cgtaactct tttttaacat cttaagggt ttctacgggt 240  
acc 243

<210> 342  
<211> 669  
<212> DNA  
<213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(669)  
 <223> n = A,T,C or G

<400> 342

tgagggtcaag	cttttttttt	tttttttttt	tttttttttca	gctttgttgt	agttganatt	60
ctgatgtttca	cctaacaaag	tccctgacaa	aacagacttc	cttcaatcca	ggtcataatt	120
tgaaacgtta	tacaataatg	agattttaagt	gatgaatgga	aagaaaagaa	ggagactgaa	180
aagatatcag	aaatctctat	tngtttttag	attcagaaaa	atataattac	aggccaacat	240
gggtntgaca	gagaggaagg	acgtcagcag	ttacttgaat	gtaacccctt	cccagcattt	300
ccaaagacct	gcaatgngct	cattgngatc	caagggcctt	gntaccctagt	ttctaggnga	360
tctacagant	tgaaacaacc	cagcacaact	ttatttcttg	gagaagatga	acccttaact	420
ntgaagggtgc	ntaaaggaaa	tnttnaactg	gtcacttcca	tgggtccggt	ttcaaagcca	480
caatcnttcc	gattaaanta	aaacctggga	naaaagccaa	cggnngggcaa	ncaaacgggn	540
gggattctac	ntttggtaac	ccattgaacc	gggggcttcn	ttttaaanan	gtgntcattg	600
gttttggttt	anaacctaaa	nccccctttt	tnaaaaaant	ggtgnaaatt	ttccnctnt	660
aacccggtt						669

<210> 343  
 <211> 500  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(500)  
 <223> n = A,T,C or G

<400> 343

ggtacagggc	agtgacatga	gctttgacaa	acagttcatg	ctaggagtag	agactgtgtc	60
ccaggactga	gggatctgcc	taagatcaag	ggaaaaatct	gaaagactcg	tcctaacaaa	120
gtgtaaaaact	aagggtttat	aagttcaagg	gaactgacta	ctgattagct	gccagtgaag	180
acaaaaatca	acactctcag	gtaacagaaa	tcagaattgc	tacaatgcat	caccaacaat	240
gtccagctta	caatttttaa	ggacgactaa	ataggagact	cccagtttct	agtctggcac	300
ataaggaggt	cggcagtcac	cacttcattc	taacaagtaa	aaagctgaac	aaactaaaaa	360
atcaacaact	cagccgggtg	tggtggctca	cgcctgtaat	cccagcagtt	tgggaggttg	420
aggcaggcgg	atcatgaggt	caggantttg	agaccagtct	ggccccacatg	gnaaaacccc	480
ggtctactta	aaanataaaa					500

<210> 344  
 <211> 483  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(483)  
 <223> n = A,T,C or G

<400> 344

ggtacttcgg	ccaaaaacag	gagcccattg	tgacaggcat	ctggcatcac	tacaaaggac	60
------------	------------	------------	------------	------------	------------	----

ccctggggct	ccatggcaac	caggcaggca	ctaaggatag	aaggagagtc	tgcggcagag	120
attccacaca	tccggcacac	atccttgagc	tttttgctga	ttgtctgtag	tgaacattct	180
ccaaggagga	tactccaatc	tttaagctcc	ccatggccaa	gacgccaag	tcgcccgaatt	240
acaactctcc	ayggtagaga	tgctatttgg	acaatcccta	tgcaccactc	ccataacttc	300
tgtagtccaa	ttttacgtgc	agatacttta	ctcctccgtg	acctaacaaa	taaagaaatg	360
gggaaggggg	aggggtccct	agataaatca	gagttattta	tcacttataa	gaccaacact	420
agaaatttcc	aagaacctat	ccatgctgna	cctgccnngc	ngccgtnnaa	aggcgaantc	480
agc						483

<210> 345  
 <211> 667  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (667)  
 <223> n = A,T,C or G

<400> 345						
ggtacaggag	agaaggctct	tatgaccgat	acctacgaat	ggatgactat	tgcaggagaa	60
aggatgactc	ttattttgac	cgttacagag	atagctttga	tggacggggc	cctccaggcc	120
cagaaagtca	gtctcgtgca	aaagagcggt	tgaaacgtaa	ggaacggcgt	agagaagagc	180
tttatcgta	atattttgag	gaaatccaga	gacgctttga	tgccgaaagg	cccgttgatt	240
gttctgtgat	tggtgtcaac	aaacagacaa	aagactatgc	tgagtctgtg	gggcggaagg	300
tgcgagacct	gggcatggta	gtggacttga	tcttccttaa	cacagaagtg	tcactgtcac	360
aagccttgg	ggatgttagc	aggggaggtt	ctccttttgc	tattgncatc	acccacaaca	420
ccagatcacc	gntcctgcac	aggtcaacat	catgtttgga	accccgnaag	aaccttgnaa	480
catgccccaa	gncnatgcca	tggtgctggt	ggccanaaat	ttttagccgt	tccaggaatt	540
aattcccggg	anaagggaacc	tnagggnaat	gccnaaccgg	ccntcaaan	gcccataaaa	600
ccttcttgcg	gaaaaaaaaa	gggggcctna	ggagggatcc	ttggggcccc	tttaancntt	660
caancnn						667

<210> 346  
 <211> 754  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (754)  
 <223> n = A,T,C or G

<400> 346						
actgaactac	ttcattacca	actcggccca	gatattgaca	tgctgatga	taacaaaaga	60
attagaagg	tgcgtctcct	ggtggaagag	ggctgtgaag	atcgaattct	ggtagcacat	120
gacatacata	cgaaaacccg	gctgatgaaa	tatggaggct	acggctattc	tcatatactc	180
accaatgttg	ttcctaaaat	gttgctgaga	ggcataactg	agaatgtgct	tgataagatt	240
ctaatagaga	accctaagca	atggctaact	ttcaaataag	atggttgctt	atgaattcac	300
accttgagta	taaaacttgc	agagaacatt	cagcgatttc	cagtccactg	tgagatatta	360
atcagttacc	taggactaat	gacagatcat	ttccttctga	tgagaaactag	gagggggttg	420
ccttctctga	gacccagcta	ttacaactgg	gccctntaag	ggaggtactt	aagcctaaat	480
tgagccccta	ataatttnaa	cttaacccaa	anttaattnc	cggaanttcc	cttngggccg	540

ggaaaccacn	ccttaagggg	ccnaaatttc	cagenccaac	ttgggcgggg	ccgggttactt	600
aanggggaat	ncccaaaactt	tgggggncccc	aaancttttg	gcggaaaacc	atngggccct	660
aaacctnggn	tnccccnngg	nggaaaaaatn	ggnaattccc	ggtttnanaa	atttccccnn	720
ccaanmtttt	tcnaaaccoc	ggnaagccnt	taaa			754

&lt;210&gt; 347

&lt;211&gt; 444

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 347

accgtctcga	tcatctgctt	cccttgggct	gagagctcca	ggggtgactc	gaaggtgacc	60
ctataaggag	tcatgagggt	cctgagggtc	tggaaacagct	tctctccatt	gggggtcccc	120
agaatgtagc	agcccatgat	gtggatgacg	ttcggctctg	ggttcacttt	gctcatcagg	180
cggctcagcc	gcttccagaa	gtgaatcatg	tcctcttcct	tctccacttt	ggcaaagggtg	240
gccaccttg	tcttgaggag	atagagggtg	ccaggacctc	cctggcagaa	aatcagcatt	300
ttccagatct	tggctccctt	gtggtagacg	ttcagcttcc	tctctatctc	ctcaaggatg	360
tcctcgaagg	ttgcgtgctc	atgggtccgt	gaggatgggg	atgatggagg	ggtcatcccc	420
ggcggatgat	agtggggatg	tacc				444

&lt;210&gt; 348

&lt;211&gt; 693

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(693)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 348

ggtactttta	gaccctttgc	cttaaagtag	tataccaaca	cagactttat	agtatgttta	60
aaaatcccaa	ctgcaagata	cacaggatgc	tgtaggcctg	atttcctgtt	gtagaacctc	120
cagccctgtg	ttgaatgagg	aggtgcaaat	atatagacct	ttaagatcag	accacagcag	180
gcattcaggt	ggaggggatg	aactccattc	attccagctg	tgcatgggga	catctgcgcc	240
ctccgcatct	cggctcattc	ctcatctgag	ccactcaaga	gggcgggtctg	gtaagtgtca	300
tctgaattca	gcttctgaat	tccaatgatt	tctcccttcc	cgtgtctctt	catccgagtc	360
aaaaggcagt	aaacaagaga	atagttgacg	gccacaatgc	tgaaggcagc	aggtagtgcc	420
agcagaaaca	catggtgatg	aacatgaagg	tggcatcatc	cttctggncc	attcnggtgg	480
tncaaaaggt	gggaacngga	caaaccncaa	ttttgccnaa	ccangttccn	tgnaaaatga	540
ttaaactggg	tccggaaaaa	gttccagcnc	aatggnggtc	ccggaaanat	cncnttttng	600
ggggantctt	acnccncctt	ttgaaaaggg	ctttccncng	gaatgaanng	aatnncttgg	660
nccaacggaa	ggcccgtttg	nggcntngta	atn			693

&lt;210&gt; 349

&lt;211&gt; 299

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 349

cgaggtagat	tctctaaaaa	ttgttactga	ctggtaagaa	atagacctga	gtttttatatt	60
ctaaccacca	atcactaaac	cacggcagca	agcactggcc	accgatttaa	tggattacga	120
cacaggaaac	cccatcaggg	ttctatgtaa	tttagtgata	ctcatgtcac	taatattgag	180

```

cattatactt gatctgcatt atattgttga tatgcagagg ctaaactagt catcatttgc 240
tctttcatct atcagtagag tccaaagttg tttgcttgaa tggactacat gttaaagggt 299

```

```

<210> 350
<211> 622
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(622)
<223> n = A,T,C or G

```

```

<400> 350
actgtttacc agatctttgc agatgagggtg cttgggttcan gccagttngg catcgtttat 60
ggaggaaaaac atannaagac tgggagggat gtggctatta aagtaattga taagatgaga 120
ttccccacaa aacangaaag tcaactccnt aatgaagtgg ctatnttaca gaatntgcac 180
catcctggga ttgtaaacct ggaatgtatg tttgaaaccc canaacgagt cttttagta 240
acggaaaaagc tgcattgg ja tatgttggaa atgattctat ccnnngagaa aantctggct 300
tccagaacga attactnaat ncatgntcac acagatactt tgangccttt gaggaatctg 360
cattttaaga aatattgggtg cncctggnatt taatancnna aaaagggctg cttgcatcaa 420
tagaanccat tnccttaggtt aagctngtat nactntgnat tgcacccctc atttgcnгаа 480
atgtcnttcn ngnnaaactnt ggtacggaac tcctccatnc ttatcccngn aagttntccn 540
gagccanagg gtncnacnt atcctatana nnagntcnnt cnggaacntna tcnnctttng 600
ggnnccntag tggccctttt cc 622

```

```

<210> 351
<211> 574
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(574)
<223> n = A,T,C or G

```

```

<400> 351
gctttaacaa tagcagcaga caaagggtcac tacaaatttt gtgaactcct gattcatagg 60
ggagcccaca ttgatgttcg taacaaaaag ggaaatacgc cacttttggt ggcatccaat 120
ggaggtcatt ttgatgttgt gcagttgcta gtgcaagcag gtgctgatgt ggatgcagca 180
gataaccgga aaatcacacc tcttatgtca gcatttcgca aggttcattgt aaaagttgtt 240
caatatttgg taaagggaagt aaatcagttc ccttctgata tagaatgcat gagatacata 300
gcaacaatta cagataagga actgntgaaa aaatgtcatc aatgtgtcga aaccatttgt 360
aangctaaaa gaccacaagc tgcaaaaagca aataaaatgc cagtntcttt taaggaactt 420
gatctggaaa agtcaganaa agacngaaac agcttttgtt aaagagaaaa gaangaaaga 480
gnaagaatag agaccgaagg actgagaata naacactagg atcgactcca gtaataagga 540
ttaattgnaa ntctaacttt nccctcatga ttgn 574

```

```

<210> 352
<211> 399
<212> DNA
<213> Homo sapiens

```

```

<400> 352
ggtacataat attccagtag gaaactgctt ccaagtttaa gcatgagctc cccaaactgg      60
agaaaaacata ttttgctatt ctgagacaac aatcagaata cagactttgg attccaggctc      120
acagtttgct ttttagacaa ggtaaagcaa agaaagccac attgtgccat cttcagctcc      180
agtggcttta gcagtgactg tttgacataa aacatgtaag aattgcttgt tgggaagagt      240
gctttaggga cccactgttt tcatttcttc ttggagttta ccttgtttca gatgcagcca      300
tgggtaggtc agagatggac tgttggtgca ataaacccaa gaatcaatgt agcctcttaa      360
tcccatcaag atgtagtttg tagcagcaaa agtgtacct      399

```

```

<210> 353
<211> 727
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(727)
<223> n = A,T,C or G

```

```

<400> 353
ggtactttta cccatttcca gttccacctt tactttatca agtggaaactt tctgtgggag      60
gacagcaatt taatggcaaa ggaaagacaa gacaggctgc gaaacacgat gctgctgcca      120
aagcgttgag gatcctgcag aatgagcccc tgccagagag gctggagggtg aatggaagag      180
aatccgaaga agaaaaatctc aataaatctg aaataagtca agtgtttgag attgcaactta      240
aacggaactt gcctgtgaat ttcgagggtgg cccgggagag tggcccaccc cacatgaaga      300
actttgtgac caaggtttcg gttggggagt ttgtggggga aggtgaagggt aaaagcaaga      360
agatttcaaa gaaaaatgcc cgccatagct gntcttgagg agctgaagaa agtaccgncc      420
ctggcttгна ttggaccgaa gttaaggcct anaatccaaa tgaaanaccn aaanccctt      480
ggtncangc cncagaccc anggccccat aattttttgg ccncnggggg attcaaattnn      540
cctttttaan cncgacttg ggnccncnaa attcncgcn ggggccnaaa naaaggggt      600
naaaggggan ccccaanagt tacccttgnc ccngggcnng ggnccgttt tnaaaanggg      660
gtcnaaantt cccatntcnc attggggggg gcccgttttc ttagggggaa tcccgagctt      720
tggggnc      727

```

```

<210> 354
<211> 411
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(411)
<223> n = A,T,C or G

```

```

<400> 354
ggtaccatag gtcatttctg gccgatagtc tgaatttaca gccattgct ggtgaaagtt      60
tagtaatttt aaattgtttc tgtgagccca tgtaacactg acaaaattct ccatttcctt      120
ttccttcac ccatctaat acaaagtttt ggattttaga accattgtca ctaggtgcct      180
tccattgcaa agtgagtga tttttggtcc gattggctat ccttggtgga ttaggtatat      240
cagggttcaca gctcaagggt gtaaagattt cagcctctga aggagtccc tttatagaat      300
tatattctgc ctggactttt gcatggtaat ccatggctgy cttgagatca tttaaagtga      360
tatttgnctt ttctctacat atacactttt ggatttccca tcttttccag t      411

```

<210> 355  
 <211> 331  
 <212> DNA  
 <213> Homo sapiens

<400> 355  
 ggtactttttc tctatctgat tcagccattt ctgccagagg gaaaagggtcg gcagaaaaga 60  
 tgtattgagt gaatagttaa ggataggatc tttgtccaaa aatttcagaa agattgagca 120  
 aatctgacgt attcattgag tgagtttctg tgttttcaaaa ggtggaggag aaatttgtgc 180  
 tggaagtttt taagcctccg ttttcttgga aatcagtcctg taacactggc aagtcttaag 240  
 atagtcccggt ttagactttg cagatgctga acctggctct gtaacgctgg gaagtcttaa 300  
 gatagtcctg ttttagacttt gcaaaccctg t 331

<210> 356  
 <211> 678  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(678)  
 <223> n = A,T,C or G

<400> 356  
 ggtactttttt aattcagcac cttttcaaaa tatgtgtgtg gatggattct tcttagggaa 60  
 agccccatat agaattctca ttttgagca tcatttttat atgctatctc cccagtgtat 120  
 cttctcaata tttataacac tttatgaaat aaatattggg ttgcctgtaa gaagagaaaa 180  
 atatagctct ttctgagaaa gagcatttgg cttgcagttt acagcaagag ctgaaattag 240  
 agaccatagg gatttccaag accaatttga ccagaaatac aaaaattctg atgtcaaaaa 300  
 ccctctcaca aaatttaaca ggtagaaatt atttttagcag tatagcctga aatccagtgc 360  
 aacaaaaatg natcccaatt ctatgatatg ncataagtat gntctcttan ctggcttnc 420  
 ttacttgggtc ctactcceta cttggacctt tngggaagaa aatgggtggc ccaancccat 480  
 ctttcaaatt ttcnaattcc ttaatatgga acccttagcc atggaataac caggggcntt 540  
 aaagttcccc ccatttaaat aatgnccctt aatntggnaa anggcttgaa ancctggnc 600  
 aaagggctgg ggtcttttaa gccctttgaa ggtaacctt caaaaagggg aaaaaacnt 660  
 ttttttttta agttgggg 678

<210> 357  
 <211> 414  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(414)  
 <223> n = A,T,C or G

<400> 357  
 acaccgagaa ccataatgaa aaaaccttcc gtgtgttttg tcatgttttg ttccagggaa 60  
 gcagttgatg agtgctgtta ctaatgcttt ctcccagatc cattcagtgg tggagaggag 120  
 gaaaatgggc tggttggatg tggcttgggt gccttgcatg tactctgcac tggttatgca 180  
 ttttaattctc ctcttttcta gttaaccttt tgccagtggg ttttccatag tctgggtatt 240  
 tgtccttata tcagttatac cacctaaggc aactgggtgc aaaatgcatt ctgttcactc 300



actgtctggg ccttccccac cctagtcttg gcacattcct tcaagaatgt agttaccgtc 360  
tgcttgggaa gatgtcagtg caaatgtgaa gataatgggc atcggnaaac ccct 414

<210> 358  
<211> 633  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(633)  
<223> n = A,T,C or G

<400> 358  
cgagggtact tcaaagaaag tcaaataccta agcctgcccc ggcccaaaga caaagccagc 60  
caggacctga ccacctgtat cctcttggtg gcaatctgct gaagccagat gagttctgct 120  
ttttaattcc aatcctattc tgccactgaa actaggcctg ggcaaccact cttaatcatt 180  
aacatatcaa aaggagtatc tcctctgaga aaagagcttt tctcaggttc tagaagctag 240  
cttttacaaa agacgtcttc aaataggggc cgggtgcagt ggctcacgcc tataattttg 300  
gcactttagg aggctgaggt gggaggattg cttgaggcca ggagtccaag accagcctgg 360  
acaacgtagt gaaacatcta tttctaccaa aaaatttaaa aaaggaaaaa attatgtcct 420  
aaaatattaa anggnatta aaanggccca ctngaacttg gaactttggg gaatctagt 480  
caacaacccc ttgccggana gaagaanctt naaccagctn ttgaattgcc nggtcaaant 540  
ggtttatatt aaaaccgata ccactttttt ataatccttt ggnaaatnaa ctgtaagccn 600  
ttttccctg aacggacctt gcctgcccac ttt 633

<210> 359  
<211> 635  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(635)  
<223> n = A,T,C or G

<400> 359  
acagattctt ttagaagctg gggcagatcc taatgcaact actttagaag aaacgacacc 60  
attgttttta gctgttgaaa atggacagat agatgtgtta aggctgttgc ttcaacacgg 120  
agcaaagtgt aatggatccc attctatgtg tggatggaac tccttgacc aggcttcttt 180  
tcaggaaaaat gctgagatca taaaattgct tcttanaaaa ggagcanaca agaaatgcca 240  
ggatgacttt ggaatcacac ctttatttgt ggctgctcag tatggcaagc tagaaagctt 300  
gagcatactt atttcatcgg gtgcaaagt caattgtcaa gccttggaca aagctacacc 360  
cttgtcattg ctgctcaaga gggacacacc aaatgtgtgg agcttttgct ctccagtggg 420  
gcagatcctg atctttactg naatgangac agttggcagt ttcccnatca tgccagnttg 480  
cccaaattng gccntncaaa aatcttgac ttggtaaatnc cccttaactn accgggncct 540  
gggacccttg gcttaaccaa agtnagnctt tgtaattaa naaaggtttg ggggncttga 600  
aaantgcttn naantnttct ccggaatggg ttctng 635

<210> 360  
<211> 403  
<212> DNA  
<213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(403)  
 <223> n = A,T,C or G

<400> 360  
 aggtgaaagt tcaccgagtg gtgctatggg cctgtccggg tgtcgctgta tgacctggct 60  
 tctgtggaca gctgtgagga gaactcagtg ctggagatcc tgcctttca ttgcaagagc 120  
 ccgcaccgac accgaatggg cgttttggag cccctgaaca aactgctgca ggcgaaatgg 180  
 gatctgctca tccccaagtt cttcttaaac ttcctgtgta atctgatcta catgttcac 240  
 ttcaccgctg ttgcctacca tcagcctacc ctgaagaagc aggccgccct cacctgaaag 300  
 cggaggttgg aaactccatg ctgctgacgg gccacatcct tatcctgcta ggggggatct 360  
 acctcctcgt gggccaactg tgggtacctng ggcgggacca cgc 403

<210> 361  
 <211> 631  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(631)  
 <223> n = A,T,C or G

<400> 361  
 ggtacaagct tttttttttt tttttttttt tttttttttt cgttttttaa aactcggggt 60  
 ttatncaata gaatgttttn tagcanatgc ctnttgtttt aatatattaa aattttgcaa 120  
 agccttttga gctactgcct tagtctaccc actgtccttt ngttatgagg tanaggatnt 180  
 catgacacca tacacacaaa cccatcattg cctgtgaatg cacgtagggc canaattcct 240  
 cagttcccg cctcttgagg gttgatactg ctgggaatgc caaccantnc acaagcanag 300  
 ggaagccccc tcaggcctnc aggaggagcc gcagcagggg gtccaattna aaccagcngc 360  
 aaaagagcct gacattttcc catccatnta tgaggaaagc cattttacag aacntggaca 420  
 tagggcactt gntttttccca cacnaanggg atgggaattt tctacctata gncattcctt 480  
 gnacttctgg anttactcan gaccanggnc caactaaang gcaaaaaccct tttggntcct 540  
 taaccagaaa agcantnctn nggactgggg acctncccg gnggccnttt aaaggngaag 600  
 ttecnnnntt ggggcggtnt aggggaccan g 631

<210> 362  
 <211> 660  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(660)  
 <223> n = A,T,C or G

<400> 362  
 ncnggtacct canttgntcg cttacgctnn anccagcatg tgtgagctag gtcatttnct 60  
 gcaagccagg caaccacacc agngtataa cctcaagcaa atgtnactcc naagcccnan 120  
 atgggactaa ggcctttgct gggctaggcg tgggtgaaan cccangcctg naagctnnta 180  
 cccaacnta attagtntca ncttactntc aatatgtgca tantttcata aagcacacat 240

tnncatgagg	aaaagangat	ggtggtgaaa	gggnaggggt	gangggacat	nttcaagtca	300
canaggctgn	anaactcagc	atgacttgtg	gacggaccac	aggncatnca	gggnnacaac	360
acngacataa	ctcaaccagt	ggtnaacngn	tctaaaccag	ggtnaacagg	agangggacc	420
aaangnaact	tcctggattt	ngctgcaagt	ttaaaagata	agttctacct	tagctttaag	480
cttagncctt	tatgggggca	aaaaaanggn	aaagtcaatt	cttgccncaa	atccaagctt	540
gggccngcca	aaaaagggaa	atnggggttn	ttaggccccca	aaacctnaat	tgagntccca	600
aggnttcaag	gcccgaggca	attgnaaagt	tcttgccctn	aaagcttggn	ccaataaaaa	660

<210> 363  
 <211> 486  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(486)  
 <223> n = A,T,C or G

<400> 363						
ggtaccttca	accttctcta	ttttaatctg	aggggaaatt	aagagaatct	caaaagttac	60
tacagagttt	gggtaggcta	gatacattta	ttaatagtaa	aagcaaccat	ggcaaaagca	120
accatactca	ttcttgataa	tgaaggatc	ttctatatac	aaacctagca	aattaaaaaa	180
aaatactaaa	acaaagtgtc	tgaagataat	gaaaggcagt	tcaattcatg	taatgtcaag	240
taactttcaa	ttgtaataga	atcatattata	ttcttatagt	gccttacagc	atattttatc	300
gttaatgaga	aaatgaacca	aaactatagt	gctaaccctg	aaaccttaaa	ccgaacctta	360
caaagttaaa	gactaagtgt	tggtcagaag	gaaaaggatg	caccatgcat	cttcacaggg	420
aaaaatgaaa	atagcnaaga	tggcagaaat	gcctgaactc	atgggtacct	gccccggcggc	480
cggttng						486

<210> 364  
 <211> 686  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(686)  
 <223> n = A,T,C or G

<400> 364						
ggtgctcgga	ataacttcct	gcagcgacca	acaggctaaa	gagggggaag	gtctggaggg	60
atccagcacc	ggtccttcct	ccggcaacca	cggtgggagc	ggcggaggaa	atggacataa	120
acccgggtgt	gaaaagccag	ggaatgaagc	ccgcgggagc	ggggaatctg	ggattcagaa	180
ctctgagacg	tctcctggga	tgtttaactt	tgacactttc	tggagaattt	ttaaatccaa	240
gctgggtttc	atcaactggg	atgccataaa	caagaaccag	gtcccgcgcc	ccagcaccgc	300
agccctcctc	tacttcagcc	gactctggga	ggatttcaaa	cagaacactc	ctttcctcaa	360
ctggaaagca	attattgagg	gtgccgaccg	cgtcactact	gcagaaaccg	tgcaaggcag	420
aaccgatca	gaactaccaa	ttccaccagc	atgcctgatt	cccacttggc	ttattggtgg	480
ggaaatacct	tgccngggcn	ggnccgttca	aangggcgna	anttcagct	cacttggccg	540
gccggtactt	aatggggatc	cnaaactttg	gnaccccaaa	cnttggggcg	nnaatncatn	600
gggcaaaaat	tggntnncnc	tgggggaaaa	atggtaatnc	cggttcacia	nttcccccca	660
attttctann	cccgggaagct	taaaagg				686

<210> 365  
 <211> 639  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(639)  
 <223> n = A,T,C or G

```

<400> 365
ggtacatcct aaagcattct ggtacaaatg aaatggaact gcctcttggt ggtctatttc      60
agaagtctgt tgtcagagtt cagttcacag gcatcaacca gaagcctagt gaggccgttt      120
gaaattctgg ccagagattaa ttttttaaag ctgcatttgg agctttttta agtcgagctg      180
tttccaaagg cttaactgaa gagtaactga tttcactgga aataaaaagtc cacatgtgat      240
cccagctgga gtgtgggtcat atttttcttg caaacctaga atgtcttggt gaacaaacgg      300
ctgtcacgtg tccccttcca aaaatgtctt aaacaccgga aaggagggca ggctaagggtg      360
tagcccttcc caccctgggt gccagggttg ggggtgctat aagtgaata tcaaagcttg      420
aggcactaat attctgaatt tcagcctcaa agganggann gtntcnngaa tcnangaagg      480
aggggaagga ccaganaacg gggaatggcc tggatgggat naatccanna cntggggnaa      540
agctggtttc ctgaataatg nggtcntggg gaccttgccc ggccggncgt tcnaaaggca      600
attccacccc atggnnnggc gttactaagg ggntccgcn

```

<210> 366  
 <211> 586  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(586)  
 <223> n = A,T,C or G

```

<400> 366
cgaggtacaa aattgcagat agtggcttac tgagtttaag atcaagatca gacttaaact      60
caacaagatc accaaaggta tttctactga gttttcctat gtcccacagt aagctgggtt      120
agagagaact caaattcctg atggaaaaca aaaccgaaca aaaaaactag aaaaaaaagg      180
tgttaaaaat gctgtgtaag ttgctgcaaa aggggaaaaa gaatagacac taactccatg      240
taatttttaga catgcagctt ttgtgttttt ttttgttttt gttttttttt ttttgaaaaa      300
aaccagttta ttttgagatc agtgaaaaga gtctangcca cagaaaagaa cagctcttta      360
atgcaagtta aaatgtgtaa atgaatgacc cgggacactt gacaccttta gatgcagact      420
tcattcgcca ctgggtggct cagacttgcc ggcngccgtt naaaggcnat tcaccnctgc      480
ggccgtctan tnggtccaac ttgtccaact gnnaanaggn tanntgtctt gggaaannnt      540
nntncattcn cnntnaccga gctaagntag cgggngnntg nggnnn

```

<210> 367  
 <211> 628  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(628)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 367

gcttcctgag	gagcaggcca	gaacggaagt	cttgggtttta	tttatagttg	ataacttaca	60
tccggcctgc	tcctcaggaa	gcacagcagg	gaggagacag	agcccaaagg	agacggcgac	120
aaaaatgcc	aaaccctga	gctaagtgtg	tgactgagag	caagcctaaa	gctcccttct	180
gagctcccca	gcagccaaag	caaagagaga	aacaggggtcc	tgacagcatga	tgtcacagaa	240
aaccagggac	cctggagcct	gggttccaat	aagaacctta	cattctgacg	ccttagattt	300
ctccctggaa	aatggggaga	aaaatactga	attgggtggg	agggccatgc	aacacacca	360
gcacagtgtc	tgatgcatt	tcagagggcc	caccagtcta	gggtctacag	aaagacagta	420
ccttngggcg	ngaccacgct	angggcgaat	tccactcact	ggcgggcggt	tctaattggat	480
ccnacttcgg	accaactttg	gcgttatcat	nggcataact	tgnttcctgn	gggaaaattg	540
gtatcccgnt	tcaaattnc	ccccanttct	aancgaann	ttaangttta	aacctggggg	600
ncaaataagn	gcttacctcc	tattgggn				628

&lt;210&gt; 368

&lt;211&gt; 618

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (618)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 368

acaattcata	gggacgacca	atgaggacag	ggaatgaacc	cggtctctcc	ccagccctga	60
tttttgetac	atatgggggc	tcttttcatt	ctttgcaaaa	acactgggct	ttctgagaac	120
acggacgggt	cttagcaca	tttgtgaaat	ctgtgtagaa	ccgggctttg	caggggagat	180
aattttcctc	ctctggagga	aaggtggtga	ttgacaggca	gggagacagt	gacaaggcta	240
gagaaagcca	cgctcggcct	tctctgaacc	aggatggaa	ggcagacccc	tgaaacgaag	300
cttggccctt	ccaatcagcc	acttctgaga	acccccatct	aacttctctac	tgaaaaagag	360
ggccttctca	ggagcagtc	aagagtttca	aaagatacgt	gacaactacc	atctagagga	420
aaggtgcccc	ttagcagaga	agcccagagc	ttactctggg	cgtttncaga	nacaactgnt	480
ggcttgcttg	ggatgcccc	agcctttgan	aggcccttac	ccattgacct	tttgccatcc	540
cttgggcatt	aacttnnggc	cttgggnntt	aancttgntt	gccttnaang	gncagggttt	600
gcttaanccg	gntgnggc					618

&lt;210&gt; 369

&lt;211&gt; 443

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (443)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 369

gcagggcggg	cngcggggtc	ttggcgaacg	gtcttcggaa	gcggcgggcg	cgcgatgacc	60
acgctacggg	cctttacctg	cgagacacct	ttccgcttca	acaacattaa	cttggatcca	120
cttacagaaa	cttatgggat	tcctttctac	ctacaatacc	tcgcccactg	gccagagtat	180
ttcattgttg	cagaggcacc	tggtggagaa	ttaatgggtt	atattatggg	ttaagcagaa	240

ggctcagtag	ctagggaaga	atggcacggg	caccgtcacg	gctctgtctg	ttgcccaga	300
atttcgacgc	cttggtttgg	ctgctaaact	tatgggaagt	actagaggag	atttcagaaa	360
gaaaggggtg	attttttgtg	gatctctttg	taagagtatc	taaccaagt	gcaagtaaca	420
tgtaccttng	gtcgcganna	cgc				443

<210> 370  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(636)  
 <223> n = A,T,C or G

<400> 370						
acatttgttt	atttaaagca	caggaaatga	ataaaatgcc	acctaaaaag	tatctgcaat	60
gaataaatta	tttccagtga	agcactgcag	atccacacac	accagtctgc	taacctttac	120
caaggccatg	tccggtgggc	ttgtgcttgt	tccagttgac	tcttccttga	gacctttccc	180
ttctgtgcaa	tgaccacagc	attagagacc	agtcctgcat	gcgctggcct	tcctcgtagg	240
catggcagac	cacgtggatg	agcagtgggc	tggcatgcag	taggcttnaa	caaatggcac	300
ttcactgttt	ccagtgaccc	tgaaatgttt	tacgtaagt	gggcctgggc	tttaaagaaa	360
agagccaggg	ttctcaagc	tgggccccct	tacttgaggc	cagcttcagg	aaatactggn	420
cttaaggagc	cagcaacttg	tccaggagtt	ttgagccctt	antttgaagg	aaaatggccc	480
cttggngtcc	ntgcaagcac	cagnnatttc	cgtgatngtg	ancaagtnac	cnnccctaag	540
ggaaggccaa	tccnctttg	ggnggantcn	agggcnctan	tcctgtttgg	aagggcttga	600
aggttgggaa	tntttaaaat	ggaggnntng	gcttcc			636

<210> 371  
 <211> 615  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(615)  
 <223> n = A,T,C or G

<400> 371						
ggtacaagct	tttttttttt	tttttttttt	tttttttttc	tgttaaagaa	tgctttatta	60
atacaaatat	acacaaactc	tgaagcacta	anaaatTTaa	atatctatgt	cacagcaaac	120
aggtggcaat	tcaacatcca	gggtcgacag	aatgcttgaa	gganactgca	acagattgga	180
ttcccatggt	gganagggca	tnttcacagg	tgaagggggg	cccagctgaa	acagcttttc	240
aagctctctc	tcctcgtaa	ggatcatgag	aggcactcca	ctcaagggga	ggtgcgcaat	300
ctggtgctct	tcaggcaggt	caaaactctc	aaagtctaga	ggattgaagg	gaaagaattt	360
ttctattttc	ggataggcat	catctgaggc	aggaacagag	ctttttgctt	taacagtctt	420
ctcagtcatc	ttttttggca	aaaaagcttg	gctgggtttg	tttgangggg	tccttgggct	480
ttacagactt	ttctgnaact	ctjttgacca	gnttcccaaa	gcctttttta	gttaactttta	540
ggtaaggctt	ntgggggcat	taaacccttt	tccaaacctg	gggttgaaac	ttggaaccnc	600
ctttaagggt	ttgnt					615

<210> 372  
 <211> 612

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(612)  
<223> n = A,T,C or G

<400> 372  
actttttttt tgttctagga atgagggtag gataaatc c agaggtctgt gtgatttact 60  
caagttgaag acaacctcca ggccattcct ggtcaacgtt ttaagtagca tttccagcat 120  
tcacacttga tactgcacat cangagttgt gtcaccttcc ctgggtgatt tgggttttct 180  
ccattcaagg agctttagc tctgagctat gatgctttta ttgggaggaa aggaggcagc 240  
tgcagaattg atgtgagcta tgtggggccg aangtctcag cccgcagcta agtctctacc 300  
taagaaaatg cctctgggca ttcttttgaa agtatagtgt ctgagctnat gctanaaaaga 360  
atcaaaaagc nagtgtggat ttttagactg naattaaatg aggcnaaang atttctattc 420  
ccagtgggaa agaanaacctt tctactgaag ttgtgggggg antatgttng aatgttagag 480  
agaaccctta aggnntnctt tgattggccc ttggagaccg nttggannac atnncccgga 540  
atnnnantan aaattnttcc nggnttnaag tttcccentg tngtngnann ccaacctngt 600  
ttttgcccc cc 612

<210> 373  
<211> 638  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(638)  
<223> n = A,T,C or G

<400> 373  
ggtactcagt atttcaaac atgaacacaa gattggaact tttggaaaaa tgggttcaag 60  
ctttcctatt agccatggaa atgcaaagtt tagcagaagc aagcaattag gcagagaaca 120  
aaaatgttaa gcatgggtgt gtctatctta ttgaagtggg tggaaatgaa agcttttaac 180  
ttgatagatt tatcagtata aaattaggga aaccacgtgt ggggaatgaa tcaatttaga 240  
gcttcgggaa ttgtgaggtg acttttgtaa cttttgttct gtgtgtgacc tgtgaaccac 300  
tagatgtgat ctgcccttgt gggcaggtcc agcatagtta ggagttaggc tttancataa 360  
aattctagct gcatctgagt ctccctgggat ggggtgctct tggctngttt tggcctgccn 420  
gattggtgag atccagancc agctttttcc tgctgcttgg cccctnncaa ttaatttgtt 480  
gggattgcca gtgcnagaan accttagttg taaagaattt taatcctacc ncgaccnagt 540  
tccaaaangc ngggttttga atgtgggaan tttnnnaatt ttcccttana aagtctaaat 600  
tttgctcngt tanactnttg gtttttaaagg gaagggaa 638

<210> 374  
<211> 503  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(503)  
<223> n = A,T,C or G

```

<400> 374
ggtacagatt aacttaacac aaaaacccga acttcaaaat gaaggtgtgt ggaggaaagg      60
tgctgctggg tctccctaca actgttcatt tctttgtgag gcagggggta gttcctgaat    120
ggctgtgggt caatgactaa tgtaaaacaa aaacagaaac aaaaaaaaca aggaactgtc    180
atttccacga aagcacagcg gcagtgatc tagcaggcct cagggccctg ggcctgggga    240
ggctacatga gggggagcct cagtcacagg atcaacctgg ggcccgaagg agcaggggtc    300
cctgcctctc cctctgcaac agatcatccc atccaacaca acccccaaaa tgttgatgat    360
gacgcaacat ggtcaaccct caagaccttt aagacaaaac agagcagcat agggaaaaaa    420
aaacaaaacg caccaatttc tgcattgtgc aatggtaggg caccntttta aaaaagtctg    480
tctaaaacan nctntgttta ctt                                     503

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```

<210> 375
<211> 611
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(611)
<223> n = A,T,C or G

```

```

<400> 375
ggtacaaaag ctgttgaact taatcccaaa tatgtgaaag ctctcttttag acgtgcaaaa      60
gcccattgaga agctagacaa taagaaggaa tgtttagaag atgtcactgc tgtgtgtata    120
ttagaagggt tccaaaatca acaaagcatg ctgttagccg ataaagttct taaactcctt    180
ggaaaagaga aagccaaaga aaaatataag aatcgtgaac ctctgatgcc atctccacag    240
tttatcaaat cttacttcag ttctttcacg gatgatatca tttcccagcc catgcttaaa    300
ggagagaaat ctgatgaaga taaagacaag gaaggggagg ctttagaagt gaaagaaaat    360
tctggatact taaaggccaa acagttatgg aagaagaaaa ctacgatana atcataagtg    420
aatgcccana aaaaaaaatn atttaaaaaa aagcttgtcc ctgccggccg gccgttcnaa    480
agggcggaatt canctccctg gngggcggtt ctannnggat ccaacnttgg gccaaccttg    540
gngnaaacan nggntatant gtttctctggg naaatggtnt ccngtttncaa tcccnaatn    600
ntnngnccgg g                                     611

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```

<210> 376
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(601)
<223> n = A,T,C or G

```

```

<400> 376
cgagggtcttt tctctctttc tgtcttcac ccagatcaaa gaatcccgag ttaggatctg      60
gatgaaggat aagcccctga attgtcgatg ggctcacccc cacactgacc cagcatctga    120
acttgcttaa cagggagccg gggctaaact gcttcaccct gcctgagaac cagggagcac    180
tgcatctctc cacaggggtg aggagaagag gcagaataaa ccaagcctgg gacacctccc    240
tcctgtctag gtgtacagca caaggttaa tactcttcac cctcatcctc tccgtcagca    300
ctatctgtct caacctctc ataatccttc tcaagggcag ccatgtctc acgggcctct    360
gaaaactcgc ctggaccaca aagtttgacc tgatgtatgc caagccgtgc ctttggtcac    420

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tggnacctgg	ccnggccggc	cggtcaangg	cgaattccac	acactggcng	gccgtactan	480
tggatccnaa	ctnggaccag	cttgngtaat	catggcatnc	tggttcctgg	ggnaaatggt	540
atccgttaca	attccnccan	ntcnanccgg	aacctaaagg	gtaaacctgg	ggngctaata	600
a						601

<210> 377  
 <211> 621  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (621)  
 <223> n = A,T,C or G

<400> 377						
ggtacaagct	tttttttttt	tttttttttt	tttttttttt	tctgttcaag	aaccagtctg	60
ggatcttgta	cccagctcta	attactggcc	gtagcagcat	attgcttaan	aattttgtag	120
aacttatctt	tcatcagcag	ctgtccaaag	gactgataaa	tagagacaga	tcccagtcct	180
ggatactttc	tgtaaatcct	aatcggagac	tcacttntna	gcaatggagg	ctgaaagtct	240
tagtgagact	cagtaaattc	cttnaggcct	tggcagatgg	atccagtagg	ttgagagaaa	300
gtgaaggact	tcaggaacag	aaagaaaatc	cccatgccac	tagcaactcc	atttttatna	360
actggaagga	acatgccaac	gaccagcaac	acatccaggg	tttatgaaaa	tgggggttca	420
cagncnaaat	gtcngntcca	agttcaggct	ncnggatttt	ggtttgaggg	actgaatggt	480
gtggattaaa	ggcttncatt	ttcttgnaac	cttgaaaggg	tttttnggan	aanaattcnt	540
tgntaatgna	agctngggtt	aaacttgacc	tngcccgggn	gggccnttca	aaagggcgna	600
ttncgcncn	ttggggggcc	g				621

<210> 378  
 <211> 327  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (327)  
 <223> n = A,T,C or G

<400> 378						
acatctccga	cagtatctgt	ttcagcatct	ttgcncttct	gaagtctttt	atacttgtag	60
caaaagttcc	tgaaactggc	ctccangtgt	ccctccacct	gtgctggcac	ttgggcgttt	120
ccacnaaact	tcccaaacag	ctcacaatcc	tggttgactg	ggacaataat	tcagcaaact	180
ggctactcag	acctggcacc	aaatgtcctg	tccaaaatgc	tgttcactga	accagtgtct	240
ggcgcccctg	ggcaggggtg	ctcgatcacc	cgccacatnc	acttggccgc	cagaagccng	300
nggggaagga	cctnggcgcg	acnacgc				327

<210> 379  
 <211> 517  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

<222> (1)...(517)  
 <223> n = A,T,C or G

<400> 379  
 actcacaagt aagaaacttt ctctactgaa ggatactgtc acagagtttg ttgcagagca 60  
 tctatatata tatttattna tttatttttaa aaaantaaac aacantgatg aacganccca 120  
 ggttcctaga accaattctc ttgattctct acttccacaa aataaagtgt atcatttggc 180  
 caagactaca gatgtgtttt tnttttttca canatgcaag tgccatgcaa aaataaatta 240  
 aagaacagat accaaaacat acatgtgata aaactacana tggtagattt ttaaaggcat 300  
 ttatataaac ntaatttata aatacttctc tttntgcctt tatatacagt cncaaantctg 360  
 gntgtttatac atntaggatt tccntngcnt gaccttnggc cgtnacnacg nntaagggcc 420  
 gaattctgga agattccatc tacaattggc ggctcgtttn tancatncct ttntanggcc 480  
 caatttngnc cnntannnga gtcngattac aanntcn 517

<210> 380  
 <211> 351  
 <212> DNA  
 <213> Homo sapiens

<400> 380  
 acgctgtgga gggctgcagt gctcgtggat tcaaaatcac agagggctgg taaatggcag 60  
 cttctgtagg aataactgca gcaggagctg gaaatgtgta ggagggagga gacaggcatg 120  
 gtaacttaca tggcggtggg gataagccat ttcgatttaa agtgccccc attaacacaa 180  
 agttcatctc ctgagctgaa cactgaaaga cttcaacata tctgtccttc atgttttttt 240  
 atgacacttc tgtgcagcca taaatgctct gtccgcagac ttcacttgga taaaggcatc 300  
 tccatgatggg cggccctggg gattcaaaac catgtgaacc ccatgagtag c 351

<210> 381  
 <211> 622  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(622)  
 <223> n = A,T,C or G

<400> 381  
 acacttccaa ttgtccatat aattaagctt tccacaatct tacacaccca tcatctcctg 60  
 aagatgctag caccgttcct gttatatcc aactcactcg ccagacctga gaattatgat 120  
 tatcgaactg agccactata tggatttcaa actttgttgg cccaccagag gaagtcagtt 180  
 ctttcctcac aggttttaat gtaaaaattc tcacatcttt ggtcgctatt gctagaatat 240  
 ggaaagatct tcccaaattt ggagcgaatg caatatcatg aacaggatca gtgactgtca 300  
 taagagtttc agctttttgca tatttcctgg tgttttcatt atattcaaaa atctgaacct 360  
 tggccattgc gttgggggcta ctgncatcac tttctacggc gatcatgggg gaatgagcac 420  
 gagagctttg naggggtnc aagaaatnca cttccagctt agcttacttg agantctctg 480  
 ctggnaaaga cccctnggct gagaattcnt aaccatctgg ggccctcaa nantcttacc 540  
 tttccattng nggacaaggt gggtacttag aaccccnngn cttgggacca acttnccntt 600  
 cggtnnkana gttttggtnt cc 622

<210> 382  
 <211> 509  
 <212> DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(509)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 382

ggtactctca	tcccgcctcc	attcaggctg	atagtaacag	cctaggtaga	gtcaacacat	60
aaaaaagtgt	aattccaggg	gaggaggatt	agaataagga	cacaaaggaa	gggaggaaaa	120
tggtctttga	ggctgaaatt	ccattaattt	ttcatagtat	tgagtttata	tttgccattg	180
catccttcaa	tctttctaaa	aaggaaatcc	ccggaacata	ataaaatctc	ttctgtatag	240
aaaagctaca	gctccacact	aagaggaatg	ccgtctgcct	taaagaatgg	aatcatcagt	300
gaccaagaat	tacttccaag	gagaaattca	ttgatattaa	aaccaaagcc	agatccagct	360
cagcaaaccg	acagccagaa	cagtgatagc	gagcagttat	ttagagaatg	gtttccaaac	420
ccgccaaact	gcacgggtgt	atttctgcc	cgtgtctctg	gaacacacat	taaactgtgg	480
aaactnnctn	ctttccgctg	ggggtcccc				509

&lt;210&gt; 383

&lt;211&gt; 380

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 383

acaattccac	ttatccatac	tattccttta	taaaaggcag	atttcaggta	agcttctaaa	60
tgcatgccgt	atgtagaggc	taatatcttc	tggcagtcct	tggttcctga	aatttgaact	120
tcatatgtgt	tttaaaacttt	tgtcaaaata	gtcatgaaag	atatgttatt	tttgcataat	180
gaggtaatat	atcaggggcg	ggcactcata	agacagtata	aatccacttg	tctaaacttg	240
catgaggctg	tgtgcattgt	aaaatgccat	aaagagtttt	gggtcaagtg	aatattttgc	300
tgaaggaata	acactttacat	ttaactgagc	acttttctgt	aataaatacc	aaagtaggtt	360
tttgtagctg	ttaaactgtgt					380

&lt;210&gt; 384

&lt;211&gt; 317

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 384

ggtcccagac	ccaagaccaa	ccgatggagg	aggaggagggt	tgagacgttc	gcctttcagg	60
cagaaattgc	ccagttgatg	tcattgatca	tcaatacttt	ctactcgaac	aaagagatct	120
ttctgagaga	gctcatttca	aattcatcag	atgcattgga	caaaatccgg	tatgaaagct	180
tgacagatcc	cagtaaatta	gactctggga	aagagctgta	tattaacctt	ataccgaaca	240
aacaagatcg	aactctcact	attgtggata	ctggaattgg	aaatgaccaa	ggctgacttg	300
gatcaataac	ccttggt					317

&lt;210&gt; 385

&lt;211&gt; 275

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 385

acttttagtc	cctgttttac	aggggttaga	atagactgtt	aaggggcaac	tgagaaagaa	60
cagagaagtg	acagctaggg	gttgagaggg	gccagaaaaa	catgaatgca	ggcagatttc	120

gtgaaatctg	ccaccacttt	ataaccagat	ggttcctttc	acaaccctgg	gtcaaaaaga	180
gaataatttg	gcctataatg	ttaaaagaaa	gcaggaaggt	gggtaaataa	aaatcttggt	240
gcctggaaaa	aaaaaaaaaa	aaaaaaaaag	ctgta			275

<210> 386  
 <211> 606  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(606)  
 <223> n = A,T,C or G

<400> 386						
ggtacatgga	tattcccaaa	ccattccatt	agaaaactgc	cctccctgca	cacacaacaa	60
aaacagcgct	atttcctaca	cctattggac	tgaaagtgt	tggaaatgga	atggtttttag	120
aatatgaaga	agaacacaaa	ccaagtagct	gtgggttgaa	cctggacgtg	agctggctgc	180
agggccgttg	ggtagaaaac	cagcatctca	taaacagggtc	actacaaaaa	taggaagagt	240
ataaaaaatag	aatatattat	gtcactatct	cgtcttctct	ttatagtagc	gtatcgtagg	300
agtgggacag	gtggcctttc	ccgaccctgc	tacgctgggt	ggtgcccgc	aaacctccac	360
tggatgggtt	gtcactggat	ggtttggttg	gggtgggtgc	acaggcgcaa	aggacatgca	420
cacgggcacg	ctcgtacttg	naaccacagan	gtgacttcag	cntgaataaa	ggngaaaagg	480
tccccatnta	nctcnggaat	tattncctnc	ccaggnccta	ttaaggggct	ttntggcttt	540
tnaccancca	agncccnccc	cttgaaangc	caaacttttt	tgaaaaaaag	gganccttgn	600
atngnc						606

<210> 387  
 <211> 339  
 <212> DNA  
 <213> Homo sapiens

<400> 387						
accacttgca	gtcaaatgaa	ttccttcgaa	atgtatttga	acttggaccc	ccagtgatgc	60
ttgatgctgc	aacgcttaaa	acgatgaaga	tttctcgttt	cgaaaggcat	ttatataact	120
ctgcagcctt	caaagctcga	accaaagcta	gaagcaaatt	tcgagataag	agagcagatg	180
ttggagaatt	cttctagatt	ttcagaactt	gaagactatt	ttctaatttc	tatttttttt	240
tctatttcaa	tgtattttaa	ctctagacac	agttttttatc	ctggattaac	ttagataact	300
tttgtagcag	tggttatatt	gcttataatt	taatgtacc			339

<210> 388  
 <211> 667  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(667)  
 <223> n = A,T,C or G

<400> 388						
taccagttgt	catcatagcc	ggagatggac	acttcaggag	ggtagcgtac	attcccatga	60
caccaatact	acagtttttcg	gagtcacagt	aagatacaca	gaattacatc	cgtaattaat	120

atgaatgcc	acatgtcaag	cagtaatttg	ttacatggca	aacaaaatca	agaaagcaac	180
catcaaaca	aagagaccca	tagcttcaga	caaggcaaat	cccaggatag	catatgagaa	240
cagctgctgc	ttcagcgaag	ggtttctggc	ataaccaatg	ataaggctgc	caaagactgt	300
tccaatacca	gcaccagaac	cagccactcc	tactgttgca	gcacctgcac	caataaattt	360
ggcagcagta	tcaatgtctc	tgctgattgc	actggctctga	aactcccttt	ggattagctg	420
agacacacca	ttctggggcc	cattaaatac	cgtagagccc	tctccagtcc	tactagcctc	480
tggtcgagat	aacctgatg	cagaaattgg	tctgtatgca	actctggatc	cagctcggat	540
cagagagggg	gtgcaggcga	gcttggcgca	ggcgaacatc	ttacactctt	cgggactgcg	600
cggctggaga	tattgggtga	caggcgacgt	gggctcctct	cccgttnct	ctctttccag	660
gaagcgg						667

<210> 389  
 <211> 613  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(613)  
 <223> n = A,T,C or G

<400> 389						
ggtaccagtt	gtcatcatag	cgggagatgg	acacttcagg	agggtagcgt	acattcccat	60
gacaccaata	ctacagtttt	cggagtcaca	gtaagataca	cagaattaca	tccgtaatta	120
atatgaatgc	caacatgtca	agcagtaatt	tgttacatgg	caaacaaaat	caagaaagca	180
accatcaaac	aaaagagacc	catagcttca	gacaaggcaa	atcccaggat	agcatatgag	240
aacagctgct	gcttcagcga	agggtttctg	gcataaccaa	tgataaggct	gccaaagact	300
gttccaatac	cagcaccaga	acagccact	cctactgttg	cagcacctgc	accaataaat	360
ttggcagcag	tatcaatgtc	tctgctgatt	gcactggctc	gaaactccct	ttggattagc	420
tgagacacac	cattctgggc	cccattaaaa	taccgnagag	ccttttcagt	cctactagcc	480
tctggncgag	ataaactga	tgcanaaatg	gnctgtatgc	caactctgga	tccacttcgg	540
ttcaaaaagg	ggtgcaggca	acttggccca	ngcgaacatn	tacacttttc	gggactgccc	600
gnttggnnaa	tgg					613

<210> 390  
 <211> 278  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(278)  
 <223> n = A,T,C or G

<400> 390						
actagtcttc	tagaaatagg	ttaaactgaa	gcaacttgat	ggaaggatct	ctccacaggg	60
cttggttttc	aaagaaaagt	attgnttgga	ggagcaaagt	taaaagccta	cctaagcata	120
tcgtaaagct	gttcaaaaat	aactcagacc	cagtcttgng	gatggaaatg	tagtgctcga	180
gtcacattct	gcttaaaagt	gtaacaaata	cngatgagtt	aaaaanannt	cttttnttga	240
actctnanga	aaancttgga	ccttngccgn	gaccacgc			278

<210> 391  
 <211> 604

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(604)  
<223> n = A,T,C or G

<400> 391  
 ggtctttttt tttttttttt tttttttgaa cacagatcac tttattggca tggctttgtt 60  
 ttaagaaaag gaaaagtgaac aaagccaaga gacagactnt gctaacagat gcctgggggt 120  
 ggctggacat ttttgcctca tgctgtgcaa agaggggggat cctggcccac acatcctgct 180  
 gattccttgg gacaagggtt tctgcctggg cctcactgca ccttcttgaa tacttgcttg 240  
 canaccacac cttccactct natctncagg tgcagctcat caccctngat ccactgggtc 300  
 cagccacgcc ccttcttctc acccttctga cacactggag cttgctccgt cccagtcact 360  
 gtgtcatgca cttgcggnca tctatgcctg nagatcctcc taaactcctt tccaacctgg 420  
 aagtccatga tgnantncct aaaagngctc accgtggcgg angatcatat ggtcancggc 480  
 ntgaacgaan tnttttggcg ggnttcanna agttgcccac ttttgcgcaa gggcccattg 540  
 gncgtnnagg gcccangtnc tttgcnngnc ccctnagggn gaatccccac nttggggccg 600  
 tntn 604

<210> 392  
<211> 610  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(610)  
<223> n = A,T,C or G

<400> 392  
 acgaggggag cgagacgaaa ggagaacggg gattattcat gacaggcctg atatcactca 60  
 tcctagacat cctcgagagg cagggcccaa tccttccaga cccaccagct ggaaaagtga 120  
 aggaagcatg tccactgaca aacgggaaac aagagttgaa aggccagaac gatctgggag 180  
 agaagtatca gggcacagtg tgagaggcgc tccccctggg aatcgtagca gcgcttcggg 240  
 gtacttattg gcacaaattc gggcagcctc cagggcttca gaggacagct gctcatattc 300  
 atctgacacc atgtggccac aaagcggaac ctcatccact tttgcctttt tccgccccag 360  
 gtcaaaaatg cgaatcttgg catcaggagac acctcggcag aagcgagact ttgggtgagc 420  
 ttgttttcca tctagggatg atgggagaca gtgacaaatc atccaccatt agatttttat 480  
 aaggagcgca caaccacagac aacccaaatc cctttggatg tgccagttca caatagtggg 540  
 catgcctcca ttgagaatat aatggctctn gacttgccgg aaggcaaact taaggccata 600  
 atgggaccng 610

<210> 393  
<211> 314  
<212> DNA  
<213> Homo sapiens

<400> 393  
 ggtcccagac ccaagaccaa ccgatggagg aggaggaggt tgagacgttc gcctttcagg 60  
 cagaaattgc ccagttgatg tcattgacac tcaatacttt ctactcgaac aaagagatct 120  
 ttctgagaga gctcatttca aattcatcag atgcattgga caaaatccgg tatgaaagct 180

tgacagatcc	cagtaaatta	gactctggga	aagagctgta	tattaacctt	ataccgaaca	240
aacaagatcg	aactctcact	attgtggata	ctggaattgg	aatgaccaag	gctgacttga	300
tcaataacct	tggt					314

<210> 394  
 <211> 498  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (498)  
 <223> n = A,T,C or G

<400> 394						
accagacctg	tcaacgtcna	tttctcggna	aatttnttgg	tatttttgaa	tctnctgcca	60
gagaatgtaa	aactccttca	gncccagctt	gccactcccg	tccgaatcta	gcatgtcaac	120
cataatttng	aatcttcgtc	cagagaatgt	agaactcctt	cagccccagc	ttgccactcc	180
cgtccgaatc	tagcatgtca	accataatth	tgcattgctc	gatgctgaag	ccatctgact	240
ggatatcttg	gcgctttgct	agaacccttc	tcaggatggg	ctgcngctca	aaggcanaga	300
tctccgnatc	ctctcctgcc	aactggggcaa	acagnctcct	gaatccatca	tcaatgtcat	360
cctcgctgat	gtcgaactct	tcaagattgg	cctcgatttc	atcatcgaca	gcttggtagt	420
cagctttctt	ttcagaaaag	acccggatgc	agaaatcccc	atccttgntg	ggttcgaagg	480
tggaaggcac	ganaatgt					498

<210> 395  
 <211> 629  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (629)  
 <223> n = A,T,C or G

<400> 395						
gccgcccgtc	aagctgtcca	catccctggc	ctcagcccgc	cacatcaccc	tgacctgctt	60
acgcccagat	tttcttcaat	cacatctgaa	taaatcactt	gaagaaagct	tatagcttca	120
ttgcaccatg	tgtggcattt	gggcgctgtt	tggcagtgat	gattgccttt	ctgctcagtg	180
tctgagtgct	atgaagattg	cacacagagg	tccagatgca	ttccgttttg	agaatgtcaa	240
tggatacacc	aactgctgct	ttggatttca	ccggttggcg	gtagttgacc	cgctgttttg	300
aatgcagcca	attcgagtga	agaaatatcc	gtattttgtg	ctctgtttaca	atgggtgaaat	360
ctacaaccat	aagaagatgc	acagcattt	tgaatttgaa	taccagacca	aagtggatgg	420
tgagataatc	cttcatcttt	atgaccaang	gaggaattga	gccaaccatt	tgnatggttg	480
gatgggtgtg	gttgcaattn	ggtttactgg	ggaaaactgg	cattangaaa	agggntcctg	540
ggtaaaagaa	tccctatggg	ggccnnaacc	tttgnttnaa	agccntngcc	ccaaaaangg	600
gnttttttggg	cggnatgttt	cnaaaaaacn				629

<210> 396  
 <211> 614  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(614)  
 <223> n = A,T,C or G

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<400> 396
ggtacttggg cttctttcag ctgcttcaac agagtggcag caaccaagct ggagtccaag      60
ccccctgata aaaggcagcc aatccttctg tctgtcatca aacgtttctt tacagcatta      120
ttaaaaagga tcctgaggtt gttcttcaca gtttctatct caaaacctgg aaagagtttc      180
tccacattgt catagagggc gtgcaggggt tcatcccgac agtgatgata tttaaccatt      240
tccacggatg caactttgcc atttggcttt aaatccaaaa ctccatagtg tccaggaaga      300
aaaggctcca cttttaaaaa gggagtgcgc gagtgcttca atgtaacaag acctttaact      360
tctgaacata cagccaaaaa tcatctttct gncattgctt taaaccaang tctgactcca      420
tatggtatct cttaccagg aaccntttt ttaatgggca ggtantccag ttaaaacca      480
atggcaaacc ccancantc caacnttcc naaatggntt ggggttnaat nccttccttt      540
gggcataaaa gaattnaang ggnttnnttt tancctttcc ccttttgggc ccggggattt      600
cnaaaattcn aaaa                                           614

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<210> 397  
 <211> 588  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(588)  
 <223> n = A,T,C or G

```

<400> 397
acctgggcat aggaaggaac caggacaggg ctggggacag aaggtgggtca cagtcatggt      60
ttcactctca gaaatatcct gggcctatgg cttaaggctt cgtggagcag ggagtggacc      120
ttgtggttat ttacaaggct gggccatata aaagcattgc aaacatggag tggagaggat      180
ccttggagat gagctggttc aatcactcct ctgaccaaca aggaaacaaa ggcccagaga      240
ggagaaggca gtgcctggcc agacgtggga cctgaaccca gccagggctc tgactcccag      300
tccccagtc cctctctac ctcttgctt ggctgagtct ttttttgata aaggccccag      360
acagcctctc cgacagtctc aggtcaggct ggggttataa atggagcagt ggactcagag      420
tcagaggccc agactctgnt cttgggcctt nacattacca agncttgcta ataaccacga      480
ggccctgggtg tggaggggct gctctctttt aagctcagct cntatctgga acaggccaca      540
aagttncatg ggataanggn tgaggcnna gcccacagng tggaggnc                    588

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<210> 398  
 <211> 348  
 <212> DNA  
 <213> Homo sapiens

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<400> 398
ggtactagcc ggacttggat tttctggaaa gatttcagtt gaggaacggg aacaaagatt      60
atgatagctt tccgaccacc accaacttca atttccttag ctgccgtaat attcagctcc      120
ctgagctgag ccttgagggtc cgagttcatc tccagctcca gaagagcttg ggagatgccg      180
gactcgaact cgtccggctt ctgcctattg ggcttcacga tcttggcgct cgaactgaac      240
atggctttct ctggggagaa cttgccgagc gccggcttag gaagagaccc aaatctcgcg      300
agagcacgtc aaaatccggc gtcgaaggc aagaggcgga aacagcgc                    348

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<210> 399  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(630)  
 <223> n = A,T,C or G

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<400> 399
acatccaagt ttaaaattat cagcgaaatg gtccatgttt ttccaattac ctgctgacac      60
ggttctaagc taagtgaagg ggaagatctg agagcgtgct gtttgtggct gttgatgcat      120
attcgtgatg taacaggtcc tggggcctca ctttacccca ttgtataaat ggggctaata      180
tcacctgcct cttacctacc tcagagggat ttgggtgaagc aaactgttaa tcttcgaaaa      240
cgaccatttc acttcttgga tatcaagtgc taaccagta tggtcttctt ttttatgtaa      300
gggacagctt tctccacaga gtcccttctg ctgggtgagga cagcatttct gagcagggct      360
ttgttctcta tgtgcattag gacttttatc atgcccttgg tctatgtgta gttacttgac      420
agcatcaaat gccggctctt cctaattgncc ttcaagggtt catgaactaa caaccacc      480
tttcancatg ggtctggccc ctgaatttgc tgnagcttcc agaccacact ggttctacca      540
cctgaacagg ccnttaaagt tccaanggt cancttcctt aattccttgg ttcccggtgt      600
atggggaact tggcctanaa aagggccncc                                     630
  
```

<210> 400  
 <211> 619  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(619)  
 <223> n = A,T,C or G

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<400> 400
actgaacagg taagtcaccc ctcagccaga gattagtcta cttcttccat gcgtgatgtg      60
tcgtcatctc cttcaagggg tggcatttct tcagttacag cagcactggg atcatcagca      120
gtagggtcat cttcatcaat acccagacca agtttgatca tcctgtagat cctgtagca      180
tgtgtctggg gatcttccag actgaagcca gaagacagga gcgcagtttc ataaagcaag      240
atgaccagat ccttcacaga cttgtcgttc ttatcagcct ctgccttttg ccttaaggtc      300
tcaataatgg aatggtcagg gtttatctcc aggtgtttct ttgctgccat gtaaccatt      360
gntgagttgc tcttagggct tgagctttca tgattcgctc catgnttgct gccagccata      420
tgtgcttggt acaatacagn atggagatgc accaatcggt tggacaaacc acctttcact      480
ttttcttcca tangctttca gatttgcaaa gttctaaact ttgggttttc cttctgntc      540
ttttcctttt atctttggaa gtccaggctt nttggggacg ncctaagctt ccctnaatct      600
ttagtggtgga nnagncntn                                     619
  
```

<210> 401  
 <211> 663  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

&lt;222&gt; (1)...(663)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 401

cgagggtactt	gggcttcttt	cagctgcttc	aacagagtgg	cagcaaccaa	gctggagtec	60
aagccccctg	ataaaaggca	gccaatcctt	ctgtctgtca	tcaaacgttt	ctttacagca	120
ttattaaaaa	ggatcctgag	gttgctcttc	acagtttcta	tctcaaaacc	tggaagagt	180
ttctccacat	tgtcatagag	ggcgtgcagg	ggttcatccc	gacagtgatg	atatttaacc	240
atttccacgg	atgcaacttt	gccatttggc	tttaaatacca	aaacttcata	gtgtccagga	300
agaaaaggct	ccacttttta	aaagggagtc	gcggaagtgt	tcaatgtaac	aagaccttta	360
gcttctgaac	atacagccaa	aaatccatct	tctgcattgc	tttaaacaaa	ggctctgactc	420
catatgtatc	tctaccagg	aacactttct	taatggcagt	attcagtaaa	accaatgcc	480
acccaccatt	ccacatacca	aatgggttgc	tcaaatcctc	cttggcataa	agatgaaagg	540
ttatttnacc	atncactttg	gccgggattc	aaattccaaa	agccgggtgca	ttttntaan	600
ggtgganaat	tnncccttgn	accnaanccc	caaatccggg	attttnttnc	ctcnaatngn	660
tgg						663

&lt;210&gt; 402

&lt;211&gt; 673

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(673)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 402

ggtacgtgtc	cagctctgaa	gggcaaagtg	cagaagatcc	taatctggaa	gtgggggtcag	60
ccaccatctc	ccacaccagt	gcctcggcct	ccagatgctg	atcccaacac	gccctcccca	120
aagcccttgg	aggggcggcc	agagcggcag	ttctttgtga	aatggcaagg	catgtcttac	180
tggcactgct	cctgggtttc	tgaactgcag	ctggagctgc	actgtcaggt	gatgttccga	240
aactatcagc	ggaagaatga	tatggatgag	ccaccttctg	gggacttttg	tggatgatgaa	300
gagaaaagcc	gaaagcgaaa	gaacaaggac	cctaaatttg	cagagatgga	ggaacgcttc	360
tatcgctatg	ggataaaacc	cgagtggatg	atgatcaccg	aatcctnaac	cacagtgtgg	420
accagaaggg	ccacgttcca	ctacttggat	ccaagtggcn	ggacttacct	ttacgaatca	480
nggcnttttt	ggaanaatga	aggttttnga	aaatccagga	ataccnacct	ggtcaagcng	540
ancttttttg	naatcccnng	ggagttnatt	gaaggggtaa	aggaaggcnn	naccagcca	600
agaaagcttt	aagaaagggg	naactttcgg	aaattggaaa	aggccttcan	aacnccaacg	660
gttggtccac	ngg					673

&lt;210&gt; 403

&lt;211&gt; 616

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(616)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 403

ggtaccgatt	atatcatctc	agtcttgaat	ttactcacgc	tgattgttga	acagataaat	60
------------	------------	------------	------------	------------	------------	----

acgaaactgc	catcatcatt	tgtagaaaaa	ctgtttatac	catcatctaa	actactattc	120
ttgcgttatc	ataaagaaaa	agaggttggt	gctgtagccc	atgctgttta	tcaagcaatg	180
ctcagcttga	agaatattcc	tgttttggag	actgcctata	agttaatatt	gggagaaatg	240
acttgtgccc	taaacaacct	cctgcacagt	ctgcaacttc	ctgaggcctg	ttctgaaata	300
aaacatgagg	cttttaagaa	tcatgtgttc	aatgtagaca	atgcaaaatt	tgtagttaaa	360
tttgacctca	gtgccctgac	tacaattgga	aatgccaaaa	actcgagtct	ttaattgtaa	420
tggttttggg	ttatccacag	ttaggccctt	tctcaataca	tatttatgna	tttcaactggg	480
catggcaaca	tggctggaaa	aatcactgga	tgtaaccaaa	caggcctttt	ttaanaaatg	540
ncncggnnta	accaaanaaa	aaaaaaaaaa	anaaagnttt	gaccttcccg	gnggggcctt	600
taaaagggna	attccn					616

&lt;210&gt; 404

&lt;211&gt; 613

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(613)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 404

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gggttctgta	tatgaagggtg	gtgtgttttt	tctggatatc	acattttcat	cagattatcc	120
atttaagcca	ccaaagggtta	ctttccgcac	cagaatctat	caactgcaaca	tcaacagtca	180
gggagtcac	tgtctggaca	tccttaaaga	caactggagt	cccgttttga	ctattttcaaa	240
ggttttgctg	tctatattgtt	cccttttgac	agactgcaac	cctgcggatc	ctctgggttg	300
aagcatagcc	actcagtatt	tgaccaacag	agcagaacac	gacaggatag	ccagacagtg	360
gaccaagaga	tacgcaacat	aattcacata	atttgtatgc	agtgtgaang	agcagaaggc	420
atcttctcac	tgggctgcaa	atcnttatag	cctttacaat	ccggactttg	gggaaatggt	480
atacctggat	ctactctggn	tttanacctt	tgggacntng	gaaanntccc	caaaanggga	540
aaggctttca	aangtaaact	ttgaacctga	aaataagttt	gttnaaacnc	ctattgcaag	600
tttgtttttn	gga					613

&lt;210&gt; 405

&lt;211&gt; 605

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(605)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 405

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ttctcttttt	caggcttata	ctcatgaatc	ttgtctgaag	cttttgaggg	cagactgcca	120
agtctctggag	aaatagtaga	tggcaagttt	gtgggttttt	tttttttaca	cgaatttgag	180
gaaaacccaa	tgaatttgat	agccaaattg	agacaatttc	agcaaactctg	taagcagttt	240
gtatgttttag	ttggggtaat	gaagtatttc	agttttgtga	atagatgacc	tgttttttact	300
tcctcaccct	gaattcgttt	tgtaaatgta	gagttttggat	gtgtaactga	ggcggggggg	360
agtttttcagt	attttttttt	gtgggggtgg	gggcaaaata	tgtttttcagt	tctttttccc	420
ttaaggctctg	ctagaatcct	aaaggcaaat	gactcaaggt	gtaaccagaa	aaccagaaaa	480

tccccattttc	nggatatnng	acccccccag	gttancgggt	attnaacttt	naccnnttta	540
ccttttaggct	ttgggaaaaa	atttnccttg	gaaaaagggt	tgggannacc	ttttttncce	600
cccc						605

<210> 406  
 <211> 255  
 <212> DNA  
 <213> Homo sapiens

<400> 406						
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aacagaacgg	aactgcctca	tcacggaaga	ccctctggaa	tcaagaactc	tacatccagc	120
aggacaactc	agagaggaag	cggaaacacc	ttccagaccg	acaggatggg	cctgcagcca	180
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ttgtggacaa	catgt					255

<210> 407  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(601)  
 <223> n = A,T,C or G

<400> 407						
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tgggggatag	gtgtatgaac	atgaggggtg	tttctcgtgt	gaatgagggg	tttatgttgt	120
taatgtgggtg	ggtgagtgag	cccnattgtg	ttgtggtaaa	tatgtagagg	gagtataggg	180
ctgtgactag	tatgttgagt	cctgtaagta	ngagagtgat	atttgatcag	gagaacgtgg	240
ttactagcac	agagagttct	nccagtaggt	taatagtggg	gggtaaggcg	aggttagcga	300
ggcttgctag	aagtctntcat	aaagctatta	gtggnaagta	gagtttgaag	ccttgaaaag	360
aggatatgat	nccactntga	gtgcgttcgg	tgtttgagtt	ngctaggcag	aatattantn	420
atgatgtaag	cccgtggcca	ttatgagant	gactgccttg	ttaagnttna	nggggtttgg	480
atgangaatg	gctngtaact	actaaggcct	atgntggctg	gttnaanagn	ttcnatntnc	540
nnantttann	tcttgcttgt	ctatgcagaa	tnganctgnt	attnatatgc	ctcacnangg	600
g						601

<210> 408  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(630)  
 <223> n = A,T,C or G

<400> 408						
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agtggcagaa	atgagataca	aaccaaagtc	tgtctaaactc	cagagttcac	accatcatgt	120
tatagtgccca	tcttcgtaca	ttgagctcca	tagagacagc	gccggggcaa	gtgagagccg	180

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## PCT/IB99/01062

gacggggcact	gggcgactct	gtgcctcgct	gaggaaaaat	aactaaacat	gggcaaagga	240
gacccctaaga	agccgagagg	caaaaatgtc	atcatatgca	ttttttgtgc	aaacttgctg	300
ggaggagcat	aagaagaagc	acccagatgc	ttnagtcaac	ttctnagagt	ttctaagaaa	360
gtgctcanta	gaggtggaaa	gaccatgttt	gcttaaagag	anaggaaaat	ttnaagatat	420
tggcaaagcg	gacaaaggnc	cgttttgaaa	gangaaatga	naacctatat	cccttccaaa	480
gggggagacc	caaanagaag	tttcaaggat	nccaatggca	ccccaaagaag	gcntncttng	540
gcctttcttnc	tcttctgctc	ntgagtattc	ggcccaaaaat	tcaaagggag	aacatcttng	600
gcctggccat	tggtgatgtt	ggcaaaaaag				630

<210> 409  
 <211> 614  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(614)  
 <223> n = A,T,C or G

<400> 409						
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gtcagctcaa	accactagtt	atacaggcta	tgcccaccct	aatagaatta	atgaaagacc	120
ccagtgtagt	tggtcgagat	acagctgcat	ggactgtagg	cagaatttgt	gagctgcttc	180
ctgaagctgc	catcaatgat	gtctacttgg	ctccccctgt	acagtgtctg	attgaggggtc	240
tcagtgtga	acccagagtg	gcttcaaagt	tgtgctgggc	tttctccagt	ctggctgaag	300
ctgcttatga	agctgcagac	gttgctgatg	atcgggaaga	accagctact	tactgcttat	360
cttcttcatt	tgaactcata	agttcagaag	ctcctagaga	ctacagacag	acctgatgga	420
caccagaaca	acctgaggag	ttctgcatat	gaatctctga	tggaaattgt	gaaaaacagt	480
gnccaaggat	tggtaatcct	gctgnnccag	aaaaacgact	tttggncatc	atgggaacga	540
ctggcacang	gtcttcaana	tggagtcnca	tatccgagcc	cattccattg	gaatnccgtt	600
caangacttn	ntct					614

<210> 410  
 <211> 611  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(611)  
 <223> n = A,T,C or G

<400> 410						
cgaggtaccc	atgttatgct	ttcacctctc	accccaatgg	agtcacacag	gcctgagttt	60
gaacagttaa	cacagcttgg	aagggacaca	tgccctgattc	ccatccttgg	agaacaatat	120
catgctatga	ggagtaggaa	gggcaagaga	tatgaaaaga	acagaggaaa	tgtgggtcct	180
agaagtcaga	aggtcatcaag	ggccatcag	tgtagaagtg	gctggggcgg	gagacgtaaa	240
cctcatccac	ggtgttctgg	ccagccaaca	gtgggtcacc	attcggcatg	atttcttcaa	300
tctttacaca	gtttctgaag	atttccattg	gctcagtgtt	caaagtgtctc	agatcacagg	360
gcaaatctgg	ctctggcact	ggctgtgata	caggtccttg	gtctggctct	ggcactgntt	420
gtgataccca	tgcatagtgt	gggtctctatc	acangctcca	gagtggactt	cagcacagac	480
tctagctttt	ggccccagaa	tccagccttg	ncctttaacca	gtggctntta	atncaggctg	540
acctctggct	ntggcaccag	ncctagttca	gcttntaang	ctccantttt	gctntgggtt	600

aagctccacn g

611

<210> 411  
 <211> 590  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(590)  
 <223> n = A,T,C or G

<400> 411  
 ggtacccttg tcttttaaag gattccccct tataaggact cttcaagtaa atccacacat 60  
 atatagtcaa ctaatttttg acaaagacac caagaatata caatggggaa aggatagtgt 120  
 cttcaataaa cagtattgga aatactggat atccacatgc aaaagaatga aattggatga 180  
 aatatggtga aattatttta caccgtaccg gctccccaac gtgcacggca ggagctacgg 240  
 cccagcgccg ggcgctggcc acgtgcagaa atggagtttc atcatgttgt cctctcgaac 300  
 tcttgacctc aagtgatcca cccgcctcgc ccttccaaag tgctgagatt acaggaagag 360  
 tctaacctgt ctctgcaagc tcttgagtcc cgccaagatg atattttaaa acgtctgtat 420  
 gagttgaaag ctgcagttga tggcctctcc aagatgattc aaaccacagat gcagacttgg 480  
 atgtaaccaa cataatccaa gcggatgagc ccacgacttt aaccaccaat gcgctggact 540  
 ttgaattcag tgcttgggaa ggatacgggc gctnaaagac atcggaacan 590

<210> 412  
 <211> 609  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(609)  
 <223> n = A,T,C or G

<400> 412  
 ggtacagaag atgctgtgga ctattcagac atcaatgagg tggcagaaga tgaaagccga 60  
 agataccagc agacgatggg gagcttgacg cccctttgcc actcagatta tgatgaagat 120  
 gactatgatg ctgattgtga agacattgat tgcaagttga tgccctctcc acctccaccc 180  
 ccgggaccaa tgaagaagga taaggaccag gattctatta ctgggtgtgtc tgaaaatgga 240  
 gaaggcatca tcttgccctc catcattgcc ccttctcttt tggcctcaga gaaagtggac 300  
 ttcagtagtt cctctgactc agaatctgag atgggacctc aggaagcaac acaggcagaa 360  
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 ctggttgccaa gtgtcacaga acttttttnc gaatttttgc cctggaaagg tggtaccgtt 480  
 tttctacgtc tttttggacc agggaagaat gtnccatctg gtttggcgga ntgctcgaan 540  
 aaagaggaag aagaagcncc gggagctgat ccaggaagaa cnatccccgg aagtggagtn 600  
 gctcantna 609

<210> 413  
 <211> 420  
 <212> DNA  
 <213> Homo sapiens

<400> 413

ggtagcgcca	catcgctgac	ttggctggca	actctgaagt	catcctgccca	gtcccggcgt	60
tcaatgtcat	caatggcggt	tctcatgctg	gcaacaagct	ggccatgcag	gagttcatga	120
tcctcccagt	cggtgcagca	aacttcaggg	aagccatgcg	cattggagca	gaggtttacc	180
acaacctgaa	gaatgtcatc	aaggagaaat	atgggaaaga	tgccaccaat	gtgggggatg	240
aaggcggtt	tgctcccaac	atcctggaga	ataaagaagg	cctggagctg	ctgaagactg	300
ctattgggaa	agctggctac	actgataagg	tggtcatcgg	catggacgta	gcggcctccg	360
agttcttcag	gtctgggaag	tatgacctgg	acttcaagtc	tcccgatgac	cccagcaggt	420

<210> 414  
 <211> 621  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(621)  
 <223> n = A,T,C or G

<400> 414	
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ggcatgtgtg	gtgaatggaa
caggcctcgg	tcttgtttcc
gggataatgc	catccactca
acatcacagg	gggagaatca
aatcaagaag	tgttttgcca
gaaataaaact	ttcctctaga
gaaaggttnc	tcagttctct
cattggangc	ncattnaatt
nnaaccggg	tgggccattn
ggttttcgg	aananntttn
	g

<210> 415  
 <211> 619  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(619)  
 <223> n = A,T,C or G

<400> 415	
acaagctttt	ttttttnttt
attctgattc	cttttatcat
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ttgcgccc	gtagaatta
tggtggctgg	aaaactgggt
gccatatagg	tatagatgag
ctatantcct	ttttcacttc
nttgacccat	ccttggagct
ggggccccct	ttgnatnaan
acngggaaat	ttcacttngg
tttantaana	tngnttngn

<210> 416  
 <211> 611  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(611)  
 <223> n = A,T,C or G

<400> 416  
 ggtagactaa ggtatgagct gaagctttag gttctccttg cttccctcaa gacctccttc 60  
 ttgctaacag aagcagtagg caattgctgc agtgcgtttc tcaccctgcc aataggctctg 120  
 tctgtatctc tggttaaggaa aatagcctgg tccctcctgg cagtgcctgg aagcttgatg 180  
 ctaattttta tatagcgtgg caagctgacc agcagtgccg ggccttgatc tgtattctgc 240  
 actatccctt tacttggttc ctggcactga atgggtctcca gccctgaaga atcacgtgtg 300  
 atcacagcag ctgacctggg ctttctcccc gagaggaagg ggcattgtcat ttttatttga 360  
 cagagggaaa atgggaactg ccttgactgc ctttgntgng ctttcccgcg taagaaagca 420  
 ctgngtttaa actgtgcaat acactngctt tgccatngat taaaatgtaa gaaaatccct 480  
 anctttaaaa cctantgggt tgaaanttat tatatnaaan actttttaac ctattnnngna 540  
 atttngggnc cttgccggta agntttnggg ggggnaaacn ngttncaaaa ggaaagggtcc 600  
 ttttaactttn g 611

<210> 417  
 <211> 609  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(609)  
 <223> n = A,T,C or G

<400> 417  
 caggtactga gacatcacat tactggccag tgttggaaca gaaactgccg caaacaccat 60  
 gagaaggcag gcaattttat actcttcttc tggactaatg ttttccgatt tttgtgaaga 120  
 aagagctacg accaatgcag gatcaatctc acaaggtaat ccggcagctg atgataactc 180  
 atacacattc attgcaacct tcatatcagt tcccttgga atgtgatcct taaaatcttc 240  
 aattgaactt acaagaaaag gaatgtggta ggataacaca tctctaagtg cttcttggtg 300  
 caatgatcgg aaggataaaa ttacaccaat tattgtcatc ctcttcaaga cactgtcaac 360  
 agatgataat cttttaaaca gtgcagccat ctggctcggg ttgtcaaagc tggctctcat 420  
 ttgtgttaac acatcaacat tctccaccac aagtttctta agttcaagca acctgtgat 480  
 gaaatatgcc acataaggct ttcacttaga aacntcatat catatgggcc taataagtct 540  
 ggataatgac ctcatcttga natgggtcaga atattcntnt gcattggaan gtaaatcaat 600  
 ttctggagg 609

<210> 418  
 <211> 643  
 <212> DNA  
 <213> Homo sapiens

<220>



<221> misc\_feature  
 <222> (1)...(643)  
 <223> n = A,T,C or G

<400> 418  
 ggtactcccg attgaagccc ccattcgtat aataattaca tcacaagacg tcttgactc 60  
 atgagctgtc cccacattag gcttaaaaac agatgcaatt cccggacgtc taaaccaaaac 120  
 cactttcacc gctacacgac cgggggtata ctacggtcaa tgctctgaaa tctgnggagc 180  
 aaaccacagt ttcattgccc tcgtcctaga attaattccc ctaaaaatct ttgaaatagg 240  
 gcccgatatt accctatagc acccncctcta cccctctag agccactgt aaagctaact 300  
 taggcattaa ccttttaagt taaagattaa gagaaccaac acctctttac agngaaatgc 360  
 cncaactata tactacccgt atggcccacc atanttacct ccnatactnc ctacactatt 420  
 tncctatnaa cncancttna naatattaat ctcataatta ccagctanct ttncttaacc 480  
 aatgnccnat tanaaattaa anntattatn taccatactc cntgtntnctn nnataatgta 540  
 nngnananat tggnttcggc ttcaatttat nnggtcccaa aaatgcctan gcttaactcn 600  
 gnactngtnc gggcggcncg ttngnaaagg ggctgaaatt cng 643

<210> 419  
 <211> 607  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(607)  
 <223> n = A,T,C or G

<400> 419  
 accagaatat ggacacattc caagctttct tgtcgatgct tgcacatctt tagaagacca 60  
 tattcatacc gaagggcttt ttccgaaatc aggatctgtg attcgccctaa aagcactaaa 120  
 gaataaagtg gatcatgggt aaggttgctt atcttctgca cctccttggt atattgcggg 180  
 acttcttaag cagtttttta gggaactgcc agagcccatt ctcccagctg atttgcatga 240  
 agcacttttg aaagctcaac agttaggcac agaggaaaag aataaagcta cactgttgct 300  
 ctctgtctt ctggctgacc acacagtcca tgtattaaga tcttctttaa ctttctcagg 360  
 aatgtttctc ttagatccag tgagaataag atggacagca gcaatcttgc agtaatat 420  
 gcaccgaatc ttcttttaga caagtgaagg ccntgaaaag atgcttntac ccccgaaaaa 480  
 gaagcttcca atacnggntt gaanaagnac cttgggcggg aacacnctta nggnggaaat 540  
 tcngnccact tggnggcctg actaangggg nccaacttng gnccaacttt ggggaaacan 600  
 ggcanaa 607

<210> 420  
 <211> 494  
 <212> DNA  
 <213> Homo sapiens

<400> 420  
 ggtacatgag aacatatatt tattgcatga ttttctagat acacagtcta tgcattattc 60  
 atatacattt attttagcct aaagtgggtt tcaaattccag ttcttcaagc cataaatgac 120  
 caagatccaa gcaatctgaa tttgtttttg tgattatttg actggaatgc ttcttaagtg 180  
 gaataactat actccgttat ccacccgatt tcctaattgta attgaaagat tttctatttt 240  
 gccacacact tggagacaat aagggttttt agttttatct actcttctat tgaagttaaa 300  
 gaaagaaaaa aagatttttt tatgtgtatt aatgaaaagc tttagtttta aataaggaga 360  
 tccagaataa aaagaagaga ctgatctctt caattattgt catctgtagc caccagcaca 420

tcactcttat gtaatcccca aaggcttggc atgccgtaag tgtgtggtgg ggtagactgc 480  
 tgccggggaa tcgt 494

<210> 421  
 <211> 366  
 <212> DNA  
 <213> Homo sapiens

<400> 421  
 ggtaccaagg ttattgatca agtcagcctt ggtcattcca attccagtat ccacaatagt 60  
 gagagtccga tcttgtttgt tcggtataag gttaatatgc agctctttcc cagagtctaa 120  
 tttactggga tctgtcaagc tttcataaccg gattttgtcc aatgcatctg atgaatttga 180  
 aatgagctct ctcagaaaga tctctttgtt cgagtagaaa gtattgatga tcaatgacat 240  
 caactgggca atttctgcct gaaaggcgaa cgtctcaacc tcctcctcct ccacggttg 300  
 gtcttgggtc tgggtttcct caggcatctt ggctaagtga ccgcacagga ccaacggcac 360  
 agccac 366

<210> 422  
 <211> 418  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(418)  
 <223> n = A,T,C or G

<400> 422  
 ggtacaagag tgtttcatga aatccgtttt taaaatgaac atctctgtgt gccacagttc 60  
 ctaggactgg ggcaaggaca cagtgtcaag tcttgttttg aggatgagtc tctgaagaga 120  
 cagaattcct gccagaatgc gcacagaaca taagtcagcc aagtgtgtcg tgccagggat 180  
 actttgactt tggtttgctg ctgctgctag ggatattggg agggttatcc tttccagggt 240  
 gtaggagagg gttgtgggta aaggctctgtc gtaaaggacc cctggctgct agctccaact 300  
 gattccgcat gcgttgttca cgctctenca gctgacgccg tcatttcagc atttttccag 360  
 ctttttttga aagctctcta ggaagccttt ccgtggaggt aatttgtcca ggtcatgt 418

<210> 423  
 <211> 374  
 <212> DNA  
 <213> Homo sapiens

<400> 423  
 ggtctattct gcatatagag aactgagggc tttccctgag aaacagttga gttgtgttgc 60  
 caaccagaat ggctcgcaag ctgactgtga gctcggaat ccttttaaaa gaaattcaaa 120  
 tgtcactttt tatttggttt taagtacacc tgattttcat gacaaatacg gtaatgctgt 180  
 attagctagt ggagccactt tctgtattgt tacatggaca tatgtagcaa cacaagtcgg 240  
 aatagaatgg aacctgtccc ctggtggcag agttacccca aaggaatgga ggaatcaagt 300  
 aatcatccca actgggtgtaa taatgaattg tttaaaaaac agctcataat tgatgccaaa 360  
 ttaaagcact gtgt 374

<210> 424  
 <211> 610  
 <212> DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(610)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 424

ggcggagctt	gaggaaaccg	cagataagtt	ttttctctt	tgaaagatag	agattaatac	60
aactacttaa	aaaatatagt	caatagggtta	ctaagatatt	gcttagcggt	aagtttttaa	120
cgtaatttta	atagcttaag	attttaagag	aaaatatgaa	gacttagaag	agtagcatga	180
ggaaggaaaa	gataaaagggt	ttctaaaaca	tgacggaggt	tgagatgaag	cttcttcatg	240
gagtaaaaaa	tgtattttaa	agaaaattga	gagaaaggac	tacagagccc	cgaattaata	300
ccaatagaag	ggcaatgctt	ttagattaaa	atgaagggtga	cttaaacagc	ttaaagttta	360
gtttaaaagt	tgtagggtgat	taaaataatt	tgaaggcgat	cttttaaaaa	gagattaaac	420
ccgaagggtg	attaaaagac	cttgaaatcc	atgaccgcag	ggagaattgc	gtcattttaa	480
gcctagttaa	cgcatttctt	aaaccccaga	ccaaaaatgg	ggaaggatta	attgggagtg	540
gtaggatgaa	ccaanttggg	ngaagatgaa	gttggaagtg	gaaactggaa	aaccgaaagt	600
ncctcgccc						610

&lt;210&gt; 425

&lt;211&gt; 368

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 425

ggtataagtt	cagagagaaa	gattccttcc	caaggctcatg	cagctagtaa	atgatagaat	60
caggattcat	agcatcacta	taggggggtca	atatttacac	aaaaaaggaa	agtcacaagc	120
ctgtttaaaa	tgaagtgacc	accttttctt	gcatagacta	aataactcga	actggcattt	180
ttaggttgga	aagacagctg	aattagtagt	taagtctgat	agccaagtaa	gttttaaaaa	240
ccaaagcatc	caggatgcac	accctgcac	catttgctgt	gcgaattaat	agttctgtct	300
ctctctctct	ttcttttttc	tttttattct	ttgagatgga	ttttcgctct	tgtcgcccag	360
gctggagt						368

&lt;210&gt; 426

&lt;211&gt; 630

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(630)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 426

actaccacag	cctttaagt	acattgattt	ataacttggt	cacaattcac	tgcatttagg	60
aaaaccagca	ttcttatctg	gtcagtgtct	gcttcttagc	aaccctaat	taaatttaaat	120
tcattctctaa	atcttagctt	caactttatt	caattacatt	tggctgacgg	ctgttttcta	180
aaacccttaa	gtgttgacca	taaatgcaaa	acttccagta	tctgttgggt	tttattagca	240
gatgctgctt	ttatttaaaa	aaaaccgaca	gtataactgt	cataattatg	gaaggcactg	300
cttccgataa	ttatattcta	ttaaaaaac	accatttata	gtgaactctg	tactgataa	360
ataaacataa	aatatctcag	tgccaaaagg	acagaaagct	ctcccctaag	attaacactt	420
tggccaaaat	ttggtagcat	attattcttt	aaagtctgac	aaactgagtc	tgcaactaaa	480

cacctgaaac	tgggtctcttt	caatgggctt	tggaagaacc	aaaataccaa	gaactaaatg	540
gaggcttatg	ggggaaggn	cgaggaaata	aatatctaag	cnttggcttc	tggccctctt	600
tcataaannc	ctgaggtaca	tattangctn				630

<210> 427  
 <211> 224  
 <212> DNA  
 <213> Homo sapiens

<400> 427						
ggtgggaggg	tgggtgtccac	tgcccagttc	cgtgtcccga	tgcccagcgc	cagcgccagc	60
cgcaagagtc	aggagaagcc	gcgggagatc	atggacgcgg	cggaagatta	tgctaaagag	120
agatatggaa	tatcttcaat	gatacaatca	caagaaaaac	cagatcgagt	tttggttcgg	180
gtagagagact	tgacaatata	aaaagctgat	gaagttgttt	gggt		224

<210> 428  
 <211> 543  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(543)  
 <223> n = A,T,C or G

<400> 428						
ggacgctctc	agctctcggc	gcacggccca	gcttccttca	aaatgtctac	tgttcacgaa	60
atcctgtgca	agctcagctt	ggaggggtgat	cactctacac	cccccaagtgc	atatgggtct	120
gtcaaaagcct	atactaactt	tgatgctgag	cgggatgctt	tgaacattga	aacagccatc	180
aagaccaaaag	gtgtggatga	ggtcaccatt	gtcaacattt	tgaccaaccg	cagcaatgca	240
cagagacagg	atattgcctt	cgcctaccag	agaaggacca	aaaaggaact	tgcatcagca	300
ctgaagtcag	ccttatctgg	ccacctggag	acggtgattt	tgggcctatt	gaagacacct	360
gctcaagtat	gacgcttctg	agctaaaagc	ttccatgaag	gggctgggga	accgacgagg	420
actctctcat	tgagancatc	tgnttcagaa	cccaaccag	gaagctgcan	ggaaantaac	480
cagagtctac	caagggaaat	gtaccctnng	gnccngnaac	cacgcttaan	gggcgaaatt	540
cca						543

<210> 429  
 <211> 346  
 <212> DNA  
 <213> Homo sapiens

<400> 429						
actatctttt	cattcagtc	cttaagcagc	ttactcttca	atgccaaaca	aactttat	60
tttaaatagt	cttaaaagtg	cttaagggag	ttctgggtcc	tcttttttagc	ctgcacagtt	120
taagatcaat	ggtaaaggta	ggaaataatc	ataagggcac	tgggaagaagg	aatgagtcta	180
aataatgtat	aatgactgtt	ccgccatacc	aattttgtca	tggtgattat	tcactaattt	240
tataggagag	tgtattgaga	tctgctacag	cttcttggat	ctttgaagca	ctgctgaatt	300
acatacacia	agcagagcag	atgtcagcac	ctgattaatc	agtacc		346

<210> 430  
 <211> 605  
 <212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(605)

<223> n = A,T,C or G

<400> 430

ggtggcgcg	ccgaggtaca	gctgggtgctt	ctgccttacc	ccatcctctc	ctctcagatt	60
caccgaggac	tggttcaggtg	gtaacattct	cttagggtag	ggaactctgc	agagggagag	120
ctgaggaggt	tccggccata	gttgtttgta	atcttagggc	tctgggcttg	gctgaaacat	180
gacgggtattg	cttggtttca	ggcttgacac	tgccaggcgc	ctattgcttg	acctctgttt	240
aaatgagggga	cttcaagact	agacagcatg	gctcttttca	gtttattgca	tgaaggagtt	300
acactagtcc	aagttaaaag	cggaccccaa	atggttacat	tatacaagct	gtgagggtttt	360
taaacctgtg	acaagggaga	gaagggaaat	tctactcatt	gcaaggaaat	cctcacttaa	420
gcttcagtga	gccacaagca	cttaaaaccc	atgaaccttc	agctgatcgt	ccttagccag	480
tccaatctct	acgaggaact	ggcatatgtc	ttgcgttggc	accctgtagc	tgaattactt	540
ctcatattcn	gatgctaatt	ncagacctgn	ccggcggcgc	tcaaaggcna	atccacnact	600
gnggn						605

<210> 431

<211> 430

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(430)

<223> n = A,T,C or G

<400> 431

acactacca	cagatcaa	aaacccctcc	ggccagtga	aaagacaaaa	ctgctaaggc	60
caaggtccaa	cagactcctg	atggatccca	gcagagtcca	gatggcacac	agcttccgtc	120
tggacacccc	ttgcctgcc	caagccagg	cactgcaagc	aaatgccctt	tcctggcagc	180
acagatgaat	cagagaggca	gcagtgtctt	ctgcaaagcc	agtcttgagc	ttcaggagga	240
tgtgcaggaa	atgaatgccg	tgaggaaaga	ggttgctgaa	acctcagcag	gccccagtgt	300
ggttagtgtg	aaaaccgatg	gaggggatcc	cagtggactg	ctgaagaact	tccaggacat	360
tatgcaaaa	caaagacca	aaaanaaann	nnaaaaaaa	aagcttgtac	ctnggccgng	420
accacgctaa						430

<210> 432

<211> 479

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(479)

<223> n = A,T,C or G

<400> 432

acaagctttt	ttttttttt	ttttttttt	ttggaacgta	ggctttctct	tgtctttatt	60
ctggggagga	ggaatcctcc	tcacatctt	cctcatcttc	atcattgaac	gaacaggggg	120

tctcgccctcg	ggactcggag	cagtgaagagg	ccgcactgct	ggactgggtga	ctgtttgggg	180
ccaggaactg	cccagttgct	aaggccactt	ctgcatccaa	gcataaccct	tggtttacac	240
ttgactgggg	taagggtggca	ccagtgggtca	ggtctaaatt	tgaaactgat	tggttagaag	300
ttcagaagta	gtccctgatt	taaccaagaa	ggctctgtgg	agatatctgn	gatataacct	360
tctaaagcct	ttggcaccag	ggatttcgca	agttttcaan	atcctccaga	gagcatttgc	420
ctgacttcag	gcnaaacgac	attcccatnc	gctttangac	cttgggcgng	accacgcta	479

<210> 433  
 <211> 600  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(600)  
 <223> n = A,T,C or G

<400> 433						
ggtaccaaac	aataccaccg	accaggagct	gcaacacatt	cgcaacagcc	tcccagacac	60
agtgcggatt	aggcgggtgg	aggagcgggt	ctcagccttg	ggcaatgtca	ccacctgcaa	120
tgactacgtg	gccttggtcc	acccagactt	ggacagggag	acagaagaaa	ttctggcaga	180
tgtgctcaag	gtggaagtct	tcagacagac	agtggccgac	caggtgctag	taggaagcta	240
ctgtgtcttc	agcaatcagg	gagggctggg	gcatcccaag	acttcaattg	aagaccagga	300
tgagctgtcc	tcctctcttc	aagtccccct	tgtggcgggg	actgtgaacc	gaggcagtga	360
ggtgattgct	gctgggatgg	tgggtgaatga	ctgggtgtgcc	ttctgtggcc	tggaacacaac	420
cagcacagag	ctgtcagtgg	tggagagtgt	cttcaagctg	aatgaagccc	agcctagcac	480
cattgccacc	agcatgcggg	attccctcat	tgacagcctc	acctgagtca	ccttccaagt	540
tgttccatgg	gctcctgggt	ctggactgtg	gccaaccttc	tncacattcc	gccaatctgt	600

<210> 434  
 <211> 417  
 <212> DNA  
 <213> Homo sapiens

<400> 434						
ggtaccaaac	cgctaagaaa	tcagctccaa	ttcgaagtgc	acctgttccc	cccaaagatt	60
gcacacctcc	taccgccttc	tccttgagtg	ctgggctgtc	atccccaagg	gcaagacgag	120
aagcacagct	ccggaactca	gccaggccca	ggattggcag	atactcgtga	tttaggctat	180
tgtcattagc	aatcttctgc	tccactttct	tcactactgg	caaaaccag	ggatggcagt	240
catccgtgcg	atatgctccc	actcccaggt	tgaccttgcg	ggggtccgga	tcctccctga	300
agtcggcagt	gagcttgaag	accaggacag	gctgggcctg	cggaacctcg	gcaaagactg	360
acgggaggtgc	catatcgaga	gactaggaat	caagagattt	cacccacgc	ccggagc	417

<210> 435  
 <211> 672  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(672)  
 <223> n = A,T,C or G

<400> 435  
 ggacagagaac gatgtggaca atgagctctt ggactatgaa gatgatgagg tggagacagc 60  
 agctggggga gatggggctg agggccctgc caagaaggat gtcaagggt cctatgtctc 120  
 catccacagc tctggctttc gtgacttcct gctcaagcca gagttgctcc gggccattgt 180  
 cgactgtggc tttgagcatc cgtcagaagt ccggcatgag tgcacccctc agggcattct 240  
 gggaatggat gtctgtgcc agggccaagtc gggcatggga aagacagcag tgtttgtctt 300  
 ggccacactg caacagctgg agccagttac tgggcagggtg tctgtgctgg tgatgtgtca 360  
 cactcgggag ttggcttttc aagatcagna aggaatatga gcgcttctt taatacatgc 420  
 ccaatgtcaa aggttgctgg tttttttggt gggctggcta tcaagaaagg atgaagaagg 480  
 tgctgaanaa anaactgccc natattcgtc ctgggggact tcaagccgt atnctaancc 540  
 tggcttcgaa ataagancct taancttaaa cncataaaca ctttatttgg atgaatgngn 600  
 taanancttg aacagtnagc atncttcgga tgtcnggaaa ttttnchnatg acccccana 660  
 annnncntgn tt 672

<210> 436  
 <211> 469  
 <212> DNA  
 <213> Homo sapiens

<400> 436  
 ggtacaagct tttttttttt tttttttttt ttttttataa aagcatttta ttgaacacat 60  
 tctggaggta agttagaacc aaaacaaaat ttgggattgg ggtggggatt ctgttttgat 120  
 gatttagatt tgggaaaact ttggattctc gtgtcagcag gggccatgct gtgggaaacc 180  
 tgaaggctga tttgaagcag aatatagaac tgcggcacgg gagaccaggg gctgggaatg 240  
 gggctctcct gggaaccaa gaatgtggtt ctgcaattgg cttggtctag actactctcc 300  
 agaaaaggat aaaacatggc ttgagcaact gcctagaaga ggcaatctcc atgggctggg 360  
 ttgctgcact tgggaaggcag tgacttgag caggttctta gctcttgaag ctcttccggg 420  
 aggaggagggt ggtggagaca aatttgacgc tggggctgct acccccgc 469

<210> 437  
 <211> 457  
 <212> DNA  
 <213> Homo sapiens

<400> 437  
 actgaggcat cttcttcagc atctgggaca ggtcccgcac ggtgggtctt ctctccagta 60  
 ttcattctct tgctagaaga aaaatctttc agagaccggg gtgacttctg ggacacctct 120  
 gcgatgtgct tgtggcgag tgctatccac aggtcgctcg cctcgtccag gagcacctcc 180  
 ttcacccgtg cctccccgat gccgctggtc tcatacttgt atacatcatt ttcgataggc 240  
 agcagatcat aactcatagc ctgaaaagtc aattcatgga gcacagggga gctgggggtca 300  
 aagcctcgat ccaggatcag gagctgggag cgtgccttgt ctgggccctc ccccatgtgt 360  
 ggatcatcag ctttataggc atcgagcttg tcctggatta gctgagccag cagggcattg 420  
 tccttgtatt cccccgata ccgcatagcc gggatacc 457

<210> 438  
 <211> 731  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (731)  
 <223> n = A,T,C or G

&lt;400&gt; 438

accaattatt	cagaatcaaa	tggatgcact	tcttgatttt	aatgttaata	gcaatgaact	60
tacaaatggg	gtaataaatg	ctgccttcat	gtcctgttc	aaagatgcca	ttagactgtt	120
tgcagcatat	aatgaaggaa	ttattaattt	gttggaataa	tattttgata	tgaaaaagaa	180
ccaatgcaaa	gaagggtctg	acatctataa	gaagtcccta	actaggatga	caagaatctc	240
agagttcctc	aaagttgcag	agcaagttgg	aattgacaga	ggtgatatac	cagacctttc	300
acaggccctc	agcagtcttc	ttgatgcttt	ggaacaacat	ttagcttcct	tggaaggaaa	360
gaaaatcaaa	gattctacag	ctgcaagcag	ggcaactaca	ctttccaatg	cagtgtcttc	420
cctggcaagc	actggtctat	ctctgaccaa	agtggatgaa	agggaaaagc	aggcagcatt	480
agaggaagaa	caggcacgtt	tgaaagcttt	aaaggaacag	cgcctaaaag	aacttgcaaa	540
gaaacctcat	acctctttaa	caactgcagc	ctctcctgta	tccacctcag	caggagggat	600
aatgactgca	ccagccattg	acatattttc	tacctctagt	tcttctaaca	gcacatcaaa	660
gctgnccaat	gatctgcttg	anttgacagc	gccaactttt	cacctatctg	tacctttggg	720
ccgngaacac	g					731

&lt;210&gt; 439

&lt;211&gt; 470

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 439

ctgcgagcca	ggattcccga	tccagagaca	atggccccga	tgggatggag	cccgaaggcg	60
tcatcgagag	taactggaat	gagattgttg	acagctttga	tgacatgaac	ctctcggagt	120
cccttctccg	tggcatctac	gcctatggtt	ttgagaagcc	ctctgccatc	cagcagcgag	180
ccattctacc	ttgtatcaag	ggttatgatg	tgaattgctca	agcccaatct	gggactggga	240
aaacggccac	atttgccata	tcgattctgc	agcagattga	attagatcta	aaagccaccc	300
aggccttggg	cctagcacc	actcgagaat	tggctcagca	gatacagaag	gtggtcatgg	360
cactaggaga	ctacatgggc	gcctcctgtc	acgcctgtat	cgggggcacc	aacgtgcgtg	420
ctgaggtgca	gaaactgcag	atggaagctc	cccacatcat	cgtgggtacc		470

&lt;210&gt; 440

&lt;211&gt; 353

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(353)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 440

ggtacattga	agagaacaag	taagcagag	ccaaatctcc	tcagccacct	gttgaagaag	60
aagatgaaca	cttcgatgac	acagtgggtt	gtcttgatac	ttataattgt	ggatctacat	120
tttaaaatat	caagagatcg	tctcagtgtc	tcttccctta	caatggagaa	gttttgcttt	180
tctttgggct	ggaggaagag	catcctatgg	tgtgtcaaaa	ggcaaagtgt	gttttgagat	240
gaagggttaca	gagaagatcc	cagtnaggca	tttatatcnn	nngatattga	catacatgaa	300
gttcgnattg	gctggncact	actcnnntgg	aatgntcttg	gnngaanaana	att	353

&lt;210&gt; 441

&lt;211&gt; 647

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



<220>  
 <221> misc\_feature  
 <222> (1)...(647)  
 <223> n = A,T,C or G

<400> 441

acattattga	tgaacgcagt	gactctgaag	aataatcaga	ggatgacatg	ggagagccca	60
atggccttcat	tgattgcca	tccctgtgag	gacagggaaa	tgggagcttg	tgggattctg	120
gggatgacag	aggtgagtga	ggtgaagccc	taggggatgg	tgaatggtag	ctccggatcc	180
ctggtgagga	gcttcctctt	aagtctgagt	tactgagagg	gaagagggag	aagctgggtg	240
aggctagcat	cgtcgacctt	ggggaatccg	ggctggggga	ctgttcacaa	gaagagccag	300
acaagaccct	actgttctta	ggtgcagaca	ggattatgaa	acctgaagct	cccagggacc	360
ccaacaaatt	ttcaaaccct	gagaatgaag	gagtgtgtgt	gactgtgaga	gtgtgtgtgt	420
gtgtgtgtgg	tgtgaggtat	gcgctcctta	agaaaatgga	aataaaccac	ccaatgagac	480
agacagacag	acagagactc	acttatccaa	gtgttctgtc	cagtcctctg	aatccgggtc	540
caagtcgcaa	gaccctttga	gctccaagtc	catacagagc	ccggcaaaat	gctccggccc	600
gctgctcggc	tcttgtgacg	atctgagtac	ctcgggccgn	gaccacg		647

<210> 442  
 <211> 1002  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(1002)  
 <223> n = A,T,C or G

<400> 442

acagaagttg	aagtgaatc	tactgaggag	gcttttgaag	ttttctggag	agggcagaaa	60
aagagacgta	ttgctaatac	ccatttgaat	cgtgagtcca	gccgttccca	tagcgtgttc	120
aacattaaat	tagttcaggc	tcccttggat	gcagatggag	acaatgtctt	acaggaaaaa	180
gaacaaatca	ctataagtca	gttgctcttg	gtagatcttg	ctggaagtga	aagaactaac	240
cggaccagag	cagaagggaa	cagattacgt	gaagctggta	atattaatca	gtcactaatg	300
acgctaagaa	catgtatgga	tgtcctaaga	gagaaccaa	tgtatggaac	taacaagatg	360
gttccatata	gagattcaaa	gttaacccat	ctgttcaaga	actactttga	tggggaagga	420
aaagtgcgga	tgatcgtgtg	tgtgaacccc	aaggctgaag	attatgaaga	aaacttgcaa	480
gtcatgagat	ttgcggaagt	gactcaagaa	gttgaagtag	caagacctgt	agacaaggca	540
atatgtggtt	taacgcctgg	gaggagatac	agaaaccagc	ctcgagggtc	agttggaaat	600
gaaccattgg	ttacctgacg	tgggtttgca	gagttttcac	cnttgncgtc	atgcgaaatt	660
ttggatatca	acgatgagca	gacactttcc	angctgattg	gaagccctta	gagaaacgac	720
ttacttacga	caaattggatg	attggtgagt	ttaacaaaacc	atntaaagct	tttaaagctt	780
ttgtaccaga	aattggcaat	gctggtttaa	gtnaaggaaa	anccctgcc	anggggaact	840
taatggaaan	ggggaaaaag	atttngnccc	aaattggaat	tnaaccnccc	gaaaaaaaaa	900
annnnnnaaa	aaagancttg	gncgggaacc	ccccttaggg	gaattcnnn	ccttgggggc	960
cnntnntaan	ggaccantt	ggnccaaaat	ttgggggaaan	tg		1002

<210> 443  
 <211> 486  
 <212> DNA  
 <213> Homo sapiens

```

<400> 443
acattagtct taattgactt attacataat cgattcgtgt ctagttttga gagctttaag      60
ttctcaatta tagttctttg aaaactgaat agcaaataac aatatgatta acttcatatt      120
tattatttca acgatctttt ttataaccga gtttaatttt taaattaaat ttctaaaata      180
gattaccaat attaaaatac ctttaagatat ttatcttttag caataatagg caatattaaa      240
gttgatttaa ctttttaatt aagtaagagt atttggtgga tgccttggtg ctgaaagtcg      300
atgaaggacg cgattacctg cgataagctt cgtggagttg gaaataaact atgatacggg      360
gatttccgaa tggggtaacc taactgagca aacctcagtt gcattttgat gaatccatag      420
tcaaattagc gagacacgtt gcgaattgaa acatcttact agcaacagga aaagaaaata      480
aatacc

```

```

<210> 444
<211> 625
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(625)
<223> n = A,T,C or G

```

```

<400> 444
gagggatgca cgttgcctta gccgagcttc ggagagaagc ctgatatgta acccaggcag      60
gtgggagcct cagtctgtcg ggctgaggtc tggcatctac aaagcctctt ggccgtgttc      120
tgaacttgaa gcctggagga gttctctgct cagcacagcc aaggaacaga attagaagaa      180
aaggaaccct ggcctgaggg aggtgacaaa cattaccacc ccagctgtgc acgatgcagc      240
agatgcaacc agatgttcac agaaggagag gaaatgtatc ttcaaggctc caccgtttgg      300
catcccgaact gtaagcaatc tacgaagacc gagggaaaagc tgcggcctac caggacatcc      360
tcggaaagta tttattctag gccaggctcc agtattcctg gctcaccagg tcatactatc      420
tatgcaaaag tagacaatga gatcctggat tacaaggatt tagcagccat tccgaaggctc      480
aaggcaatatt atgacattga acgtccagat cttattacct atgagccttt ctacacttcg      540
ggctatgatg acaaacagga gagacagagc cttggagagt ctccgaggac tttgnctnct      600
acttcatcag cagaagggtg cctcg

```

```

<210> 445
<211> 1002
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(1002)
<223> n = A,T,C or G

```

```

<400> 445
accacaactc ccaggatttt cctggatcaa accttgtatc tcttctgcaa gtattgtgta      60
tattgggtctg agagacgtgg accctcctga acattttatt ttaaagaact atgatatcca      120
gtatttttcc atgagagata ttgategact tggatccag aaggtcatgg aacgaacatt      180
tgatctgctg attggcaaga gacaaagacc aatccatttg agttttgata ttgatgcatt      240
tgaccctaca ctggctccag ccacaggaac tctgtttgtc ggggggactaa cctatcgaga      300
aggcatgtat attgctgagg aaatacacaa tacagggttg ctatcagcac tggatcttgt      360
tgaagtcaat cctcagttgg ccacctcaga ggaagaggcg aagactacag ctaacctggc      420
agtagatgtg attgcttcaa gctttggtca gacaagagaa ggagggcata ttgnctatga      480

```

ccaacttctt	actcccagtt	caccagatga	atcagaaaat	caagcacgtg	tgagaattta	540
ggggacactg	tgactgaca	tgtttcacaa	caggcattcc	agaattatga	ggcattgagg	600
ggatagatga	atactaaatg	gttggctggg	tcaatactgn	cttaatgaga	acattttacac	660
attctcacia	ttggtaaagg	ttccccctta	ttttgggtgac	caatactact	ggaaatggaa	720
tttggnntttt	tgcagttcac	agggtantaa	tatggctcag	taccttnggc	cgcgaacacg	780
cttaagggcn	aattccacac	acttgggcgg	ccgttcttaa	nggatccgaa	ctnggancca	840
agcnttggcg	taaacatggg	cnataantgg	tttctggggg	gaaatggtat	ccggttacaa	900
tttcccccca	nattccnaac	ccggaagncn	tnaagggtaa	aaccggggg	gccctaangg	960
ggngctaact	ccaaatnaaa	tgggttgngc	ttaatggccc	nt		1002

<210> 446  
 <211> 367  
 <212> DNA  
 <213> Homo sapiens

ggtacaaaag	agtatgggct	cacaagaaga	tgattcagga	aacaaacat	ccagttattc	60
ttgaaactaa	catccatcct	gagctaaaca	agagaaacta	ccatcttggc	cagtgcacag	120
tggtcggagg	gcagcagaga	ggaccaagcc	tggtgtcacct	ggagactaag	aaattaagtt	180
ttgttttgac	atcttcagtc	ctgtgtgctt	tcagaaaacc	atcttctctg	caaagaaagg	240
aaacagattt	gcaaacttta	aagtctgtcg	tggattttatt	tatcctcaga	ttattgttac	300
tgcattaaat	ctaccttttt	gttttaagtt	gcttgaaaaa	aaaaaaaaaa	aaaaaaaaaa	360
aaaaagc						367

<210> 447  
 <211> 754  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc feature  
 <222> (1)...(754)  
 <223> n = A,T,C or G

actcttgggg	tggaaaagat	ctacacataa	caagttcaga	aaccacagtg	ataaactaac	60
ctaagaaaaa	cgtttaactt	ttatctacct	gaaacacaaa	attaaaaggc	aacctataaa	120
ctggaaaaaa	atatttgcac	caaataatac	aaaagattat	caatatacct	aagatgtaaa	180
tggctttttg	aaaacaatca	atagaaaaat	gactaggaat	tagaaaatca	tacacacaca	240
cacacacaca	cacacgcaca	cacacacaca	ccacaaatgg	ccaattgaca	catggtagag	300
atgttcagtc	accagcagac	aaagcaatgt	tcacatccac	agggaaagca	gactcgatcc	360
gtcggaggag	caaagggttt	caatgtmata	aagcccgggt	ctgaggaaan	angggaaggc	420
atcagggttt	ncctcaccca	gtgaagaaca	cctaattnga	aaaaaatccc	ttcccttgct	480
tggggccagt	tttaaccaat	tatggaaccc	ttgaaagtct	ttaaagaagt	ttnaaccagt	540
caatttnoct	ttcttcngaa	atggatatgt	atttcaggca	tttcccaaag	gaggtttanc	600
canccggacc	gttgaaaaaa	ggtcntggaa	cctccnagg	gnaaagttca	tttgccaagg	660
gtnttaattt	ttcttaagga	agggaaaaaa	aaaaancttg	naaaaatncc	ctnngattgn	720
ccccattggn	aancccggnn	atnggtttta	aatt			754

<210> 448  
 <211> 551  
 <212> DNA  
 <213> Homo sapiens

<400> 448  
 accagaaccg agttcgggat actcacaggc tcatcactca gatgcagctg agcctggcag 60  
 aaagtgaagc ttccctggga aacactaaca ttccctgcctc agaccactac gtggggccaa 120  
 atggcttttaa aagtctggct caggaggcca caagattagc agaaagccac gttgagtcag 180  
 ccagtaacat ggagcaactg acaagggaaa ctgaggacta ttccaaacaa gccctctcac 240  
 tgggtgcgcaa ggccctgcat gaaggagtcg gaagcggaag cggtagcccg gacggtgctg 300  
 tgggtgcaagg gcttgtggaa aaattggaga aaaccaagtc cctggcccag cagttgacaa 360  
 gggaggccac tcaagcggaa attgaagcag ataggtctta tcagcacagt ctccgcctcc 420  
 tggattcagt gtctcggctt caggagtcga gtgatcagtc ctttcagggtg gaagaagcaa 480  
 agaggatcaa acaaaaagcg gattcactct caagcctggg aaccaggcat atggatgagt 540  
 tcaagcgtac c 551

<210> 449  
 <211> 398  
 <212> DNA  
 <213> Homo sapiens

<400> 449  
 accttcaaca ggcattctcaa cagcccccac accaacacct gtgtgcaagg catagccatc 60  
 acgcggaaaa gtctcaggac tcagaactac accataaatg caggatcttt ttatttcata 120  
 taaaaatgat caatgtgaaa aaagccaaac tgtatgctgg ttttacagac tccgaccctt 180  
 cctgacagtc gtcttgtctg gccaggctgg gggcccagca ttccctggaag ggagagacag 240  
 cccggcatct cagtatttca ttgggacaac aagctggatg tggcagggaa agctgagagc 300  
 gccaaaggtcc ccttgcttta tccaagctc ggagggacgc agcctggcat ggctctggcc 360  
 tagcagccag gtgacatggc caggcacctt cctgtacc 398

<210> 450  
 <211> 672  
 <212> DNA  
 <213> Homo sapiens

<400> 450  
 accttattag aaagcgacgg caaactatgt gccagcagcc gcggtaatat ataggctcgca 60  
 agcgttatcc ggaattattg ggcgtaaagc gtccgtaggt tttttgctaa gtctggagtt 120  
 aaatgctgaa gctcaacttc agtccgcttt ggatactggc aaaatagaat tataaagagg 180  
 ttagcggaat tcctagttaa gcggtggaat gcgtagatat taggaagaac accaataggc 240  
 gaaggcagct aactggttat atattgacac taagggacga aagcgtgggg agcaaacagg 300  
 attagatacc ctggtagtcc acgcccgtaaa cgatgatcat tagttggtgg aataatttca 360  
 ctaacgcagc taacgcgtta aatgatccgc ctgagtagta tgctcgcaag agtgaaattt 420  
 aaaggaattg acgggaaccc gcacaagcgg tggagcatgt ggtttaattt gattctacgc 480  
 gtagaacctt acccactctt gacatcttct gcaaagctat agagatatag tggagggttaa 540  
 cagaatgaca gatggtgcat ggttgccgt cagctcgtgt cgtgagatgt taggttaagt 600  
 cctgcaacga gcgcaaccct tttctttagt tactaatatt aagttaagga ctctagagat 660  
 actggctgga cc 672

<210> 451  
 <211> 554  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

&lt;222&gt; (1) ... (554)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 451

acacgctgcc	aaagtaattc	ctgctcatcc	atgccctgtc	tctgtctctt	ttagagtcac	60
accttatttg	agtatagggt	gcttaatttt	gctagacttc	ctgaaaacac	taagggtggag	120
tatcagaagt	gatttttagtc	acagttctgc	gggagagctt	agaataacat	cctccttttg	180
gaggtggctc	tgggtgctgt	gatgttggtg	tacagtcttt	attgtaagtc	tgatacaaaa	240
tgctaataaa	tttaatgttt	ttcttcctta	atttattggc	atagttcttc	aggtagcacc	300
tcatttttat	taatgatatt	gggattaaact	atgaacaagc	tatatgtaga	catttgcatt	360
taaggacatt	gcagtggttc	aaagatccca	tcattgcagc	ttgnatcctt	tagatccaat	420
cggaaacttc	tggagcttac	attaaatgct	catttgagct	aaatagaaat	ctggtnaacc	480
aganttgggc	aatactttta	aaganactgg	ggacnattan	ggntagannng	ggctattttcc	540
cctttnaggg	nggg					554

&lt;210&gt; 452

&lt;211&gt; 566

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (566)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 452

acaaataaat	tgtatgcttt	ccggataagt	gacatgttta	tatgggtgata	aaggggaatta	60
taatgctctt	aactcttatg	tagtatgttc	tcataaaaat	caccaagcat	gagaacactg	120
tttagtctca	ttcatcactc	agcacagcct	ctttctgtcc	acttcagggc	caagtctttg	180
ccatggcccc	acataacgtg	taaattagct	tcagggatca	aaaatccttg	aaaacccagt	240
ttgctgagcc	ttgaaggaag	cctttagacc	cagcttcaat	gaagtcacag	ctccctgagg	300
gtcctgggtg	actggaggcg	gcctcccaag	cctgggagct	gtgtgcctgg	atgggtctcac	360
tgggggtgat	acccaagctc	atggctccct	ctcaacctct	aacccttctt	aacacaagtc	420
acccctggnc	ccctgagcac	tcttgaagtc	cctttgaaag	gacatttcta	ggctnctaag	480
angcctgggt	ccttcagctg	gcaccctnan	tttaccagcc	nggnangcag	gntttccaan	540
ttntgctggg	tnaanaaaanc	ccgncc				566

&lt;210&gt; 453

&lt;211&gt; 688

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (688)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 453

ggtaactcta	cttcattttt	gaaggcttgt	aactgctgag	gtgtaggtgc	tgtcacattc	60
aacattttca	ctgccacatc	accatgccac	tttcccttgt	agactgttcc	aaatgatcca	120
gatccaattc	tttgtcccac	tgtaatctgc	ccatcaggaa	tctcccaatc	atcactcgag	180
tcccgtctac	caagtgtttt	cattcgattc	ctgtcttctg	aggatgaaga	tgacttcctt	240
tctcgctgag	gtcctggaga	tttctgtaag	gctttcacgt	tagttagtga	gccaggtaat	300

gaggcagggg	gggtagcaga	caaacctgtg	gttgatcctc	catcaccacg	aaatccttgg	360
tctctaata	agtcataat	attgacaggt	tctattgtgt	ttatatgcac	attggggagc	420
tgatgaggat	cggncctcgt	gcccaaattg	aattccatga	tcttcactctg	ctgggccgaa	480
nggctgnngga	aatggaaatgg	gttttgaaga	gaccgactgg	tgagaattgg	ggcccaatan	540
aatcnaggcg	ggcgccgaaa	gggatgatcn	cantgtaggc	agtctttggg	aaggaccctn	600
ttctgnngga	ttgggggggt	taannacttg	gggacaaccg	caaatacaant	ggcctattaa	660
nccttaggga	aattntanct	gccngggg				688

&lt;210&gt; 454

&lt;211&gt; 565

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (565)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 454

actggctgcg	aggcgccagt	cgatcaatgt	atgacaggag	ctgagacttg	gccacaccag	60
gatcccccat	cagacagatg	ttgatgttgc	cccggatttt	catgcctcga	ggagactggg	120
ccacaccccc	gactagcagg	agcagcagtg	ccttcctcac	atcttcacgc	ccgtatat	180
ctggggcgat	tgaagctgcc	agcttttctg	agaaaatcct	cctctgcaat	ttgcctcagc	240
tectccctgg	tgagctctcc	agccccagac	tcatcatcct	cactcttggt	catcttcaca	300
atccgatggg	cttccaggta	ggtttctgag	agtaaaccct	gtacttgatg	cactttgcac	360
agacaggggtg	tggtgaatag	gcattat	ataaggaaaa	gaagtctgtg	gtgactgggt	420
tgaaataaag	tggtaatgg	gatggagggc	agntcttttg	gatttgctg	gtantgctga	480
tgggagacng	gagaccacct	ngggcgcgaa	cacgcttaag	gggganaatt	cngcacactg	540
ggggggccgta	ctataggngn	ccnnc				565

&lt;210&gt; 455

&lt;211&gt; 566

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (566)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 455

acagtccctga	ttgcatcata	attgtgggtt	ccaacccagt	ggacattctt	acgtatgtta	60
cctggaaact	aagtggatta	cccaaacc	gcgtgattgg	aagtggatgt	aatctggatt	120
ctgctagatt	tcgctacctt	atggctgaaa	aacttggcat	tcatcccagc	agctgccatg	180
gatggatttt	gggggaacat	ggcgactcaa	gtgtggctgt	gtggagtggg	gtgaatgtgg	240
caggtgtttc	tctccaggaa	ttgaatccag	aaatgggaac	tgacaatgat	agtgaataat	300
ggaagggaagt	gcataagatg	gtggttgaaa	gtgcctatga	agtcctcaag	ctaaaaggat	360
ataccaactg	ggctatttga	ttaagtgtgg	ctgatcttat	tgaatccatg	ntgaaaaatc	420
tatccaggat	tcatcccng	tcaacnatgg	tnaaagggga	atgtatggca	ttggagaaat	480
gaanctttcc	tngncccttc	cntgnatccc	ncaaa: jgncc	cggggattna	acnagcgggt	540
ttnaancccn	aancttttag	ggnggg				566

&lt;210&gt; 456

```

<211> 559
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(559)
<223> n = A,T,C or G

<400> 456
ggctcctggcc tcagcccgcc acatcacccct gacctgctta cgcccagatt ttcttcaatc      60
acatctgaat aaatcacttg aagaaagctt atagcttcat tgcaccatgt gtggcatttg      120
ggcgctgttt ggcagtgatg attgcctttc tggtcagtgt ctgagtgtga tgaagattgc      180
acacagaggt ccagatgcat tccgttttga gaatgtcaat ggatacacca actgctgctt      240
tggatttcac cggttggcgg tagttgaccc gctggttggg atgcagccaa ttcgagtga      300
gaaatatccg tttttgtggc tctgttacia tggtgaaatc tacaaccata agaagatgca      360
acagcatttt gaatttgaat accagaccaa agtggatggg gagataatcc ttcattctta      420
tgacaaagga ggaattgagc caacaattgn atgttggatg gtgggttgca tttggtttac      480
tggatactgg catagaaagt ggtntctggga gaaaaaccta tgggggcaga ncntttttta      540
agcctggcca ananagnt
                                     559

<210> 457
<211> 552
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(552)
<223> n = A,T,C or G

<400> 457
gttacgacaa aatttaagag gaataacaaa tacaaatddd ctgttaagaa cggaaagggtg      60
caaactagca gagtcaatac tggtaaccag aaggcactaa tccaaacaca taaatdddcaa      120
aagctgggta tattatggaa taccatatat actggccttt gccagtttgg gatttctgca      180
atagcaataa gcctcgtttc tgtttccaat tataacaaca aaaagatgag ttactaatga      240
acattccact acagaagtct aggctatggt gataaattga aaacttatct agactactct      300
gtctaagagc aataaaaagt aaacactctt ttatccagca gcactaggaa acaggggtgaa      360
tttaccaaga taaattaggt tggggatacc tactgccaac ttgtgcggtt gtcgaattca      420
ctgnaatatg tattcctctt attgatagag ctcttgaatg naaaccacct anaagtgagg      480
ggaaaagctt caggatcatg gnccacaatt atgntatagn gcttttngng ggtngagccn      540
aacccegnntn cc
                                     552

<210> 458
<211> 561
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(561)
<223> n = A,T,C or G

```

```

<400> 458
accccaacaa tcttcaagcc acagtccaag agaagtctca ggaaagcaga cgtagaggaa      60
gaatcccttag cactcaggaa acgaacacca tcagttagga aagctatgga cacacccaaa      120
ccagcaggag gtgatgagaa agacatgaaa gcattttatgg gaactccagt gcagaaattg      180
gacctgccag gaaattttacc tggcagcaaa agatggccac aaactcctaa ggaaaaggcc      240
caggctctag aagacctggc tggcttcaaa gagctcttcc agacaccagg cactgacaag      300
cccacgactg atgagaaaac taccaaaata gcctgcaa atctccacaacc agaccagtg      360
gacaccccag caagcacaaa gcaacggcca agagaaacct caggaaagca gacgtagagg      420
aagaattttt agcactcagg aaacgaacac catnagcagg ccaagccntg gncaccccaa      480
aaccngcngt nagtggttga gnaaaaaattt cncccanttt tgggnaactt ccgngcacia      540
nttnggceen tntttgnaa a

```

<210> 459

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(468)

<223> n = A,T,C or G

```

<400> 459
ggtacctcga catcctgaac actggataaa aaagttgatt aaatccagaa gtgcgatgtc      60
cctgtcttgt ttatatgatt caatccagtc atccaccacg gactgcattg cacttttccc      120
cagtttcacc acctcaaata atgtgacagg ctcccccttc ccattctgtt gaggggtgtc      180
attagctctt ccacggcctg ctctctctaat tccagcttca attctgctct tctcacctgg      240
agattttcga ggtttcttat ttgtagatgg aggccggcca ggacgacccc tttttctttt      300
tcctttgacc tctgtttctt caagctcgct gccagcatcg gaatgggcag tagtttcatt      360
agttgaatcc tgtaacactg gtaattctga agtaatcatt gctggagagg cctttcacaa      420
tgcagcaaaa taatcaagtg ctgnacctgg ccgggcccggg cgctcgaa      468

```

<210> 460

<211> 566

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(566)

<223> n = A,T,C or G

```

<400> 460
acttcttgca tgttgtcaca cggtgctgtg agaatcaggt gctgcctata tggctccact      60
gggagagggc agatggaagc cgctgcctca tctgtcgtgg aacgtgtgct gtgcacctcc      120
tccctttgct gatcttaatc tctgtccttt tactgtaata aactgtaact gtgagcctaa      180
cagctttcct gactctagt agtccttcta gcaaatgaaa ggaggggtgg cttggagacc      240
tatgaacttg cacctgcccc cgctcgtttt aggtctggca cagggagggg ggctggtctc      300
tttggagggg gtcttcatcc attggggtcg ggtccaactc tggaggccca cgtccttgcc      360
agctccagtc tctctccct ctcagtcccg acgctgtcac cttgtgccct ctgtctgtgg      420
atcctgggaa gagctgntct ctctgctcac agctgatan gagacatgcc cattagctga      480
ggcgcttgca tgcttgact actcgattgn caaangtnca agngntccca nnncccccg      540
ggtctatgga naannggggg gnanan

```



<210> 461  
 <211> 570  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(570)  
 <223> n = A,T,C or G

```

<400> 461
ggtactatag catagcctgc ctttgctggt gtgtggcgat taggcctggt ggaactgcca      60
tcaataaatc aagcgtgatc aggggtgagga acagggaaga aggaaatgtg gggaaatggg      120
atgaacatca ggtggatcac agagatgcag tcatgggggt cagggtgtgt atccggaata      180
atgtgggagg ctggattgaa gtccggggcca ggaacaatgg taattgtggg acttaacaaa      240
aagtgagaac agctgaagga gtcaggggagc agaaagtata tgcgtcaggt gtgaggaaga      300
aaatagattt tggaagttaa gagaaatgta gagagtgagt tgagcatagt ttgtgatttt      360
gagggcctct aatagtatta aagcagtggc agcccgtac accgcagaca tganggctag      420
gctaaaacag taagggccaa gttgtttgca cagaaaggct tcaggggtgcc ggtcctggct      480
cttgggtaag aattttggac cggacttaac catgcctaag gaaggggaag gaggttgtngt      540
tttgtnaggg gaccaggtt tgggaaaann                                     570
  
```

<210> 462  
 <211> 573  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(573)  
 <223> n = A,T,C or G

```

<400> 462
cgaggtacca ccagtatatg gaatgttagg gaaaaacttt gttccagttc cttttttttt      60
tctttctact ttcaagttta agtgaaccat actgaaatga ccaacaagtc tgccgtgtaa      120
gttacatgtc atgattgtgt tgtaaataga ttatggggga gaaaatgaag taaatgttgc      180
tgatgatccc catatttatt gatcatatta aggttggtta tatagtttgg aaatgaccag      240
ccccctaagc agtgtttgat taactttatgc taatcagatg attactcata tattctgcta      300
attttctagc tttattcttg ttatttggaa aaattattag ccaaatgcct tcctaggtgg      360
atccagttgg aagatatgtc cagaaacctg aagaaaaatt gacgctgcct ttgtgtgctg      420
gattgctcta cttgattaga tcatgatata tcaaggntga attttttagag ggaaaattaa      480
ttctgatatc ttattggatc ccttgataag ntttttctcg gatttttttt tttccccaaa      540
gaatttttca tttgngncct ngcccggcgg gcc                                     573
  
```

<210> 463  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(574)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 463

accatatcct	gtgtttgaat	caaaccgga	gttcttctat	gtggaaggct	tgccagaggg	60
gattcccttc	cgaagcccta	cctggtttgg	aattccacga	cttgaaagga	tcgtccacgg	120
gagtaataaa	atcaagttcg	ttgttaaaaa	acctgaacta	gttatttcct	acttgcctcc	180
tgggatggct	agtaaaataa	acactaaagc	tttgagctcc	cccaaaagac	cacgaagtcc	240
tgggagtaat	tcaaagggttc	ctgaaattga	ggtcaccgtg	gaaggcccta	ataacaacaa	300
tcctcaaacc	tcagctgttc	gaaccccgac	ccagactaac	ggttctaacg	ttcccttcaa	360
gccacgaagg	gaagagaggt	tttcttttga	ggcctggaaa	tgcccaaaat	cacnggcctt	420
aaaacaggaa	ggttggaaaa	tctctttcaa	tgagaaaatg	tggggnaact	cttgggcctt	480
aaacaagctg	tgaaagggtgc	ccggtcccgg	taatttgggg	ccttttcccg	gaagacnttt	540
ttgtggaaag	gnnttacctga	ngggggggcc	cttt		574	

&lt;210&gt; 464

&lt;211&gt; 458

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 464

ggtactgccg	ctcggagatc	tttacttgtt	tttactttga	acatgagcag	agaaaagaca	60
aagaaaaaga	tggccatggc	aaagctgatc	cgatacacag	ctttataacc	aaccagcaca	120
tcacaatctt	tatctgcatt	tatatcagcc	tcattggattt	taaatcccc	ttcacaaaat	180
ccaggaatct	tcttcaagta	agtttccatc	tcttttctct	gcattgatata	ggatacgaca	240
gtgctcagga	ggagaatgaa	agcataaatg	aggcgagtca	ccgtggaatt	cttactgtta	300
ggacagcaac	tacacagcaa	acatgaggca	ccgctgcaga	ggcatggaac	ccagctggcg	360
agggagaaga	cacccagcac	agcccccattg	gtgacgccag	tgatggaggt	ggccggtcct	420
gaggctgctt	tctaacacgg	tggttaactgc	cagctgag		458	

&lt;210&gt; 465

&lt;211&gt; 580

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(580)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 465

gcggccgang	tacttcacca	tcactgactc	catggacttg	atcagccgnc	gctggatgta	60
tncagtctca	gnagtnttga	cagccgtgtn	aatgagcccc	tcacgacccc	ccatggngtg	120
gaaaaagaac	tcagtgggtg	tgaggccggc	taggtaggag	ttctncacaa	agccacggct	180
ctnaggcccc	tagtcatcct	tgatgaagtg	aggcagagtc	cggtgcttga	agccaaatgg	240
aatccgcttg	ccctcgacgt	tctgctgtnc	aacgacagcg	atnacctggg	agatgttaat	300
cttggaacct	ttagctccgg	acacgaccat	anacttgaag	ttgttgtatt	canacagga	360
tttctgagca	gaggagccag	tcttgtctcg	ggcatcgtaa	agaatgcggg	tcacctgatt	420
ctcaaacgtc	tgncgcagan	tggtccctgg	ggngggctcc	agctcattgt	tgngngnctt	480
cttnatgacc	tctantacgt	cctgnttggg	gcttttaana	gggcctgaat	gncccgggaa	540
ggnnttanaa	ttncnatggg	gttcccaagg	ccanacttnn		580	

&lt;210&gt; 466

&lt;211&gt; 566

```

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(566)
<223> n = A,T,C or G

<400> 466
caagcctttt tttttttttt tttttttttt gggcatgcct gtgttgggtt gacagtgagg      60
gtaataatga cttgttggtt gattgtagat attgggctgt taattgtcag ttcagtgttt      120
taatctgacg caggccttat cggaggagaa tggtttcatg ttacttatac taacattagt      180
tcttctatag ggtgatagat tggccaattt ggggtgtgagg agttcagtta tatgtttggg      240
atthtttagg tagtgggtgt tgagcttgaa cgctttctta attggtggct gcttttaggc      300
ctactatggg tggttaaattt tttactctct ctacaagggt ttttcctagt gtccaaagag      360
ctgntcctct ttggactaac agtaaattta cnagggggat ttaaagggtt ctgggggcca      420
aatttaaagg ttgaactaag aattctatct tggaccaacc agnttttcac cangcctcgg      480
gaagggttgg ccgcctntac ctattaaact tccccctatt ttgggacctt naccggngg      540
ggctcctttt aacngggcnt aagggg

<210> 467
<211> 597
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(597)
<223> n = A,T,C or G

<400> 467
gcgtgggtccg gccgaggtac gtgatgccct tacagctgaa aaatccaaga ttgagacaga      60
aatcaagaac aagatgcaac agaaatcaca gaagaaagca gaacttcttg ataataaaaa      120
accagctgct gtggttgctc ccattacaac gggctatacg gtgaaaatca gtaattatgg      180
atgggatcag tcagataagt ttgtgaaaat ctacattacc ttaactggag ttcattcaagt      240
tcccactgag aatgtgcagg tgcatttcac agagaggtca tttgatcttt tggtaaagaa      300
tctaaatggg aagagttact ccatgattgt gaacaatctc ttgaaacca tctctgtgga      360
agggcagttca aaaaaagtca agactgatac agttcttata ttgtgtagaa agaaagtgga      420
aaacacaagg tgggattacc tgacccaggt ttgaaaangg agtgcaaaga aaaaggagaa      480
gcccttncta tgacactgga accagaatcc tngtnagggg attgatgaaa ggtcttaaga      540
aaaatttttg aagaangnga cattgatttt gaagcgnacc ctttattnan gcttggg      597

<210> 468
<211> 562
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(562)
<223> n = A,T,C or G

<400> 468

```

ggtactggat	aaagggctga	catcaagagc	aaacagaagt	cttttcctag	tgcataatgca	60
aactggccaa	ttccttccaa	ctgaatgcat	atttgccaga	tgttactgtt	catggagcaa	120
atagtgggac	ttggccttga	gaaggctaga	aaagatgtaa	cttggttagt	gtgttcacca	180
gacgtgatgg	cttgagggcc	tgggtgctcc	atcatcagct	cctctcccat	ttcctcagtt	240
tcaagacagg	taaccaaata	ccaattttct	tgacttgtgt	attcttcaag	tatagatgtc	300
acaatctctc	tcagttcttc	tgggtttgtt	ttaatatgtt	tttcgtgaag	atcctcaacc	360
tccagcccg	cagcccctgt	aaccagttca	ttaaggatca	tggcagcttg	cttccggtaa	420
accacagatt	gatggtaaag	ttccataaag	tgatccacaa	gcnaataaaa	gattnccata	480
ataaccaagt	agcttgacaa	acctggctna	agagcntgaa	gaatctctta	tccgtgaaga	540
aaccggaata	tcttctntng	gg				562

<210> 469  
 <211> 533  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (533)  
 <223> n = A,T,C or G

<400> 469	
cgaggtacca	ataccaccaa
agttggacga	gttgggtgta
attgccatcc	ttacgggtga
cagcatgttg	tcaccattcc
gccaattttc	ttaatgtaaag
gtaggggtggg	ctcagtggaa
gtgtgtaagc	cagaaggcca
ttcaccaaca	ccagcagcaa
catgnttttg	ataaagctct
ttttgtagac	atcctggaga
ggatgcagtc	cagagcctca
ctttccatcc	cttgaaccaa
aaccagaaat	tggcacaat
tgctgacttc	cttaacaatt
tccattttgt	taacaccgac
tgctctcggt	tctgccattc
caatcaggac	agcacaagtc
gggtcctggg	ccatcaatga
ggcagggcgca	agggcttgtc
agcagcggtg	ttccactggc
ggcatgttag	cacttggctc
gctactgtgt	cgggggttga
tcctcatatc	tcttctggct
aattagttgt	ttcacacca
ttggagatac	cagcttcaaa
aggctgagat	gtcctgnaat
acc	

<210> 470  
 <211> 672  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (672)  
 <223> n = A,T,C or G

<400> 470	
ggtacacccat	ataaacagca
tcaccaccaa	tgatatatct
aaacgctgct	tgacatctag
tgtatgcaaa	cgacagcaca
tttcgttctt	ttaggtgggt
tcattctttc	ggtccaaaat
acataattgag	gtttgatgat
tgnaattcag	atccacngaa
cctgncccg	ccggccgntt
agnngaatcc	nagcttcggg
gatgaagtcg	gagagatagt
atctggattt	attagagatc
gtaactagaa	ggctcatcaa
agcaaattctc	tgcaactctc
taaatcaagc	tgctgacata
agatcccat	gtcccccttg
ggcttttagg	tcattcttcta
atcttctggc	atcttctggc
cgaaaggcca	aattccagca
anccangcn	ttggcgnaa
ctaatacact	tagatcatgt
gtatagtaat	agcagccttt
acatgaaaat	atcagctttc
ctcctgaaag	atcttcaaca
caattgcctg	tgtctttgtt
cagccttagg	aatctgggtc
gaatcttttg	aaagnaattt
agtcaggan	gatcatcgga
cacttggccg	gccgggtactt
taactgggtt	

ccctggggggg aaaaatggta atcccgggta ccaanttcnc cccnacatac cnaacccgga 660  
 agccttanag gg 672

<210> 471  
 <211> 387  
 <212> DNA  
 <213> Homo sapiens

<400> 471  
 cgagggtgagc tttgaaacaa ctgatgagag cctgaggagc cattttgagc aatggggaac 60  
 gctcacggac tgtgtggtta tgagagatcc aaacaccaag cgctccaggg gctttgggtt 120  
 tgtcacatat gccactgtgg aggaggtgga tgcagctatg aatgcaaggc cacacaaggt 180  
 ggatggaaga gttgtggaac caaagagagc tgtctccaga gaagattctc aaagaccagg 240  
 tgcccactta actgtgaaaa agatatttgt tgggtggcatt aaagaagaca ctgaagaaca 300  
 tcacctaaga gattattttg aacagtatgg aaaaattgaa gtgattgaaa tcatgactga 360  
 ctgagacctg cccggggccgg ccgtcga 387

<210> 472  
 <211> 241  
 <212> DNA  
 <213> Homo sapiens

<400> 472  
 ggtacgaatc gtctcctggc actgtgcagg cccacagctg acggcgatga cctccttcac 60  
 cagcttcttc tccttgagcc gcacagcctc ctccaccgag atctcacaga aggggttcat 120  
 ggagtgtctc acaccatccg tgaccacacc ggtcctgtca ggcttcactc ggatcttcac 180  
 ggcgtagtct atgacccctc tgacagctac gagcacgcgc agctccgcca tcttcccgcc 240  
 g 241

<210> 473  
 <211> 470  
 <212> DNA  
 <213> Homo sapiens

<400> 473  
 ggtactagtt cactatcggt gtctgattag tatttagcct taccgggtgg tcccggcaga 60  
 ttcagacagg gtttcacgtg ccccgcccta ctccagatag atctatgaga ttttatgatt 120  
 tcgtatacag gaatatcacc ttctatgttg aagctttcca acttcttcta ctatcataaa 180  
 attttgaac tcaatgtaag atgtcctaca accccttttt acagggtttgg gctctttcgc 240  
 tttcgctcgc cactactgac gaaatcatta tttattttct tttcctgttg ctactaagat 300  
 gtttcaattc gcaacgtgtc tcgctaattt gactatggat tcatcaaaaat gcaactgagg 360  
 tttgctcagt taggttaccc cattcggaaa tctccgtatc atagttttatt tccaactcca 420  
 cgaagcttat cgcaggtaat cgcgtccttc atcgactttc agacccaagg 470

<210> 474  
 <211> 637  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(637)  
 <223> n = A,T,C or G

&lt;400&gt; 474

acctcttcct	gataagattg	aagtaaaaac	tgggtaggaa	gatgaagaag	aattcttttg	60
caaccgcgcg	aaattgtttc	gtttcgatgt	agaatccaaa	gaatggaaaag	aacgtgggat	120
tggcaatgta	aaaatactga	ggcataaaaac	atctggtaaa	attcgcttc	taatgagacg	180
agagcaagta	ttgaaaatct	gtgcaaatca	ttacatcagt	ccagatatga	aattgacacc	240
aaatgctgga	tcagacagat	cttttgtatg	gcatgccctt	gattatgcag	atgagttgcc	300
aaaaccagaa	caacttgcta	ttaggttcaa	aactcctgag	gaagcagcac	tttttaaatag	360
caagtttgaa	gaagcccaga	gcatttttaa	agccccagga	acaaatgtag	ccatggcgtc	420
aaatcaggct	gcagaattgt	aaagaaccca	caagtcatga	taacnaggat	atttgcaaata	480
ctgatgctgg	aaacctgatt	ttgaatttca	ggntgcaaga	aagaaagggc	ttggtggcat	540
tgaaccactg	ntcattaaga	atgcttcact	gctaaaaatg	ngattatgcc	aaattaancc	600
agcaataaga	ctcgtggccc	ccttaactga	actgttt			637

&lt;210&gt; 475

&lt;211&gt; 647

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(647)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 475

ggtacaagcc	atagtggaaa	gaatgaatct	ctccctaaaa	tagcagttgc	aaaagcagaa	60
agggggagac	agagaatatg	gaacccacac	gatgcaactg	aacctagcat	tattaacagt	120
aaattttttg	agcctgcccc	aaggccacat	gttatcagca	gctgaagagc	atctacagaa	180
accagctgca	aggacaaaaa	cagaacaact	gatttgggtg	agagatccga	taacacgaag	240
ttgggaaata	ggtaaaataa	taacttgggg	gagaggttat	gcttgtgttt	ctccaggcca	300
atatcaatag	cctatttggg	taccatcaag	acacctgaaa	ccttatcgtg	agccagatgc	360
tgaggaatag	actccgggag	ggatcctgag	aacccccag	ttgcagccat	gtttgagact	420
gatgctgagg	aggactccaa	ctgtcacgag	cacagcccc	atctggggac	agatcaagaa	480
gctgtcacag	atggaagaag	aaaaccttga	ggaaagcagg	acaatcgggc	ccatgagtaa	540
aatctgatgg	tagctataaa	cgggttttan	cacnccatgn	tattctttng	ttaaggctga	600
cncngagaac	aattatacct	antggggata	tttatcatct	tggtngg		647

&lt;210&gt; 476

&lt;211&gt; 665

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(665)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 476

accttattag	aaagcgacgg	caaactatgt	gccagcagcc	gcggtaatac	ataggtcgca	60
agcgttatcc	ggaattattg	ggcgttaaagc	gtccgtaggt	tttttgctaa	gtctggagtt	120
aaatgctgaa	gctcaacttc	agtcgcgttt	ggatactggc	aaaatagaat	tataaagagg	180
ttagcggaat	tcctagtga	gcggtggaat	gcgtagatat	taggaagaac	accaataggg	240
gaaggcagct	aactgggttat	atattgacac	taagggacga	aagcgtgggg	agcaaacagg	300

attagatacc	ctggtagtc	acgccgtaaa	cgatgatcat	tagttgggtg	aataatttca	360
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ttaaaggaat	tgacgggaac	ccgcacaagc	cggtggaaca	tgtgggttaa	tttgattcta	480
cgccgtagaa	ccttaccac	ttcttgga	tcttctgcaa	agctatngga	gatatagtgg	540
anggttaaca	gaatggccc	aaggtgcatg	ggtggccgca	gctcgtgctg	tgagaaggta	600
nggtnaagtc	ctgnaacgag	cgccaacct	ttcttttagta	ctaataataa	gttaaggact	660
ntagn						665

&lt;210&gt; 477

&lt;211&gt; 319

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 477

cgagggtactt	ttcaattatg	ttaacgtaaa	atactcgtaa	cgaatgtagt	atgagtttaa	60
agtgaagcttt	tcagatccta	taagtgcac	ctaagtaatg	acaggcttta	agataaggaa	120
tatatgcatt	ttgttaaggc	agaaatctca	taaaatttca	tgaaaaacca	tggtcaatcc	180
aatgatgcac	tttttaagac	aagtttgtct	ggaaactgga	aggggtcaaaa	gacaacaaaa	240
aagcacacac	caaaaaacct	cactttaagc	aaatctataa	cttgaaaaaa	aaaaagccta	300
agaatattct	gagagtgggt					319

&lt;210&gt; 478

&lt;211&gt; 419

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 478

acccacgatg	atgtggggag	cttccatctg	cagtttctgc	acctcagcac	gcacgttggt	60
gcccccgata	caggcgtgac	aggaggcgcc	catgtagtct	cctagtgcca	tgaccacctt	120
ctgtatctgc	tgagccaatt	ctcagagtggg	tgctaggact	aaggcctggg	tggttttag	180
atctaattca	atctgctgca	gaatcgatat	ggcaaatgtg	gccgttttcc	cagtcccaga	240
ttgggcttga	gcaatcacat	cataaccctt	gatacaaggt	agaatgggct	cgctgctgga	300
tggcagaggg	cttctcaaaa	ccataggcgt	agatgccacg	gagaagggac	tccgagaggt	360
tcatgtcatc	aaagctgtca	acaatctcat	tccagttact	ctcgatgacg	ccttcgacc	419

&lt;210&gt; 479

&lt;211&gt; 312

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 479

acatcctgga	gacctgaaga	attctgttga	agtcgcactg	aacaagttgc	tgatccaat	60
ccgggaaaag	tttaataccc	ctgccctgaa	aaaactggcc	agcgtgcct	acccagatcc	120
ctcaaagcag	aagccaatgg	ccaaaggccc	tgccaagaat	tcagaaccag	aggaggtcat	180
cccatcccgg	ctggatatcc	gtgtggggaa	aatcatcact	gtggagaagc	acccagatgc	240
agacagcctg	tatgtagaga	agattgacgt	gggggaagct	gaaccacgga	ctgtggtgag	300
cggcctggta	cc					312

&lt;210&gt; 480

&lt;211&gt; 640

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(640)  
 <223> n = A,T,C or G

<400> 480  
 ggtaccaaca attcctccta ccagtggctg agcatactct gcagagtcag cctgcagcac 60  
 tgtgggtgact tctcttggac tcagggtgatt aacttcgctg ctgctatagc gaactgggggt 120  
 ttctctcatgg tccactgctt ttgcaggaag aaactgcttc attcctttcc accaacctgc 180  
 ccggcccccag taaggtaagt cataggtgcc ttcagttttt ttctttctgt ttctccagtg 240  
 ccaagcacac actaatatga gaatgagagt agtgaggacc atgaccagca cagggacaag 300  
 aactgcagcc agcgctacat ctttgggttac atttggagtt acggtagtat ttctgatatc 360  
 aggactggca gttgtttgtt ctgtctgtgc aggaattca ttgctactgc gaagttgtag 420  
 tggttgcgta aattttgggg cagcaccttt ggctattttg gaggggctgt agtggttttg 480  
 aggn cattgc tgttncnaag aggtggaggt tgagtaagtt ttggangacn actttangaa 540  
 taaactgaca tccgagcagt tcattttcat ggcaattttc gctgccatgg gtaaggatta 600  
 ctctaataaa cgtgccataa ttggtggcaa aagtattccc 640

<210> 481  
 <211> 501  
 <212> DNA  
 <213> Homo sapiens

<400> 481  
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 tgatctcaat gagagagtc ccgtcggttc ccagccctt catggaagct tttagctcag 120  
 aagcgtcata ctgagcaggt gtcttcaata ggccaaaat caccgtctcc aggtggccag 180  
 ataaggtga cttcagtgt gatgcaagtt cttttttggt ctttctctgg taggcgaagg 240  
 caatatcctg tctctgtgca ttgctgcggt tggcaaaat gttgacaatg gtgacctcat 300  
 ccacaccttt ggtcttgatg gctgtttcaa tgttcaaagc atcccgtca gcatcaaaag 360  
 ttagtatagg ctttgacaga cccatattgca cttgggggtg tagagtgatc accctccaag 420  
 ctgagcttgc acaggatttc gtgaacagta agacattttg aaaggaagct gggcccgtgc 480  
 gcccgagagc tgaaagcgtc c 501

<210> 482  
 <211> 306  
 <212> DNA  
 <213> Homo sapiens

<400> 482  
 ggtacctata cagggatggc tcccacgcat cctcagtga ccccaaacc atctccactt 60  
 acactcaggc actcccagga cctgacagct actccccgtt atcgctcttc agttcgaagc 120  
 cctggccaat ctaccagccc acatgacgca gttacctggc catttctcca cggttcccgt 180  
 gagggcccca caccagccg cacaagagcc cctcctgcat tccgtcctca cacacaggcc 240  
 tgtgtatgca cttgctactg tcacactctt gctagcagaa gagggccctg taatggccga 300  
 tatccc 306

<210> 483  
 <211> 663  
 <212> DNA  
 <213> Homo sapiens

<220>



<221> misc feature  
 <222> (1)...(663)  
 <223> n = A,T,C or G

<400> 483  
 acagaatttc ttatttcttg aagactctgt ggttgaccac ttcttcatta gttacctgca 60  
 gcaagacacc ttccatttta ctaccaacac cactgaagga accaagaaaa gctttattaa 120  
 tgatcacttg gcttgccctca gctgttgaaa tgaagcactt tacagtcttt gtggcagcag 180  
 aatatacttg tccatgggtc atatcaatgc catggcaaat aggaagaagc tcagtatcgg 240  
 ctctctccac cataaccccc acttcctcca ctgcctcctg gaccatagtt tcctccacca 300  
 tatggtcccc ccatgttcct gctaccacca aagtttccac tcttcacacg ggccaagtca 360  
 gaaagaccat gacataaaga gagatggcga aactgaaacg gattatttct tttgncttca 420  
 aaacatctca tcaattttatc actcatccat tctacctggg acttagaaaa ctccaccaca 480  
 ttgtaactga cattatttag gagtgcctaat gagtaaacac ccaatcctgn atcttttagtc 540  
 cctccaaatc tggatccaag aagtttagcc aggttccaaa cttntggctg ntggggggcca 600  
 ctgntattaa cacattttca ttancttgaa nnggttccag gacanttggc anaacttgtt 660  
 ant 663

<210> 484  
 <211> 228  
 <212> DNA  
 <213> Homo sapiens

<400> 484  
 cttgggtctg aaagtctgat aaggacgcga ttacctgcga taagcttcgt ggagttggaa 60  
 ataaactatg atacggagat ttccgaatgg ggtaacctaa ctgagcaaac ctgagttgca 120  
 ttttgatgaa tccatagtc aattagcgag acacgttgcg aattgaaaca tcttagtagc 180  
 aacaggaaaa gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa cttgtacc 228

<210> 485  
 <211> 672  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc feature  
 <222> (1)...(672)  
 <223> n = A,T,C or G

<400> 485  
 acggagccct ctgaaaaatg acaaagatgg tatgatgtat ggcccaccag tggggactta 60  
 ccatgacccc agtgcccagg aggctgggag ctgcctaata tctagtgatg gtctgcctaa 120  
 caagggcatg gaattaaagc atggctccca gaagttacaa gaatcctgtt gggatctttc 180  
 tcggcaaaact tctccagcca aaagcagcgg tcctccagga atgtccagtc aaaaaaggta 240  
 tgggcccgcct catgagactg atggacatgg actagctgag gctacacagt catccaaacc 300  
 tggtagtggt atgctgagac ttccaggcca ggaggatcat tcttctcaaa accccttaat 360  
 catgaggagg cgtgttcggt cttttatctc tcccattccc agtaagagac agtcacaaga 420  
 tgtaaaagaac agtagcactg aagataaagg tcgccttcct tcaactcatca aaaagaaagg 480  
 cgcttgatta aagcatttca atttcctatg gccccatctt ttnttcacag gtcnngggat 540  
 antcaaggct tattncctta agaagagaat ttccttccan gggncctttc cnagggtcccc 600  
 aatagtttna aaaactggnc ctggtnggta ancctttann aaagcccttg gttaaaancc 660  
 cnaaanann ng 672

<210> 486  
 <211> 637  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(637)  
 <223> n = A,T,C or G

<400> 486  
 ggtacaatag agcttttgat ctgatacaag aatttagaaa tataaaacaa aataactata 60  
 aaagtttagga ggcatttgaa tggcatttcc ttagaagaac ctgctaactc tgtatcattc 120  
 tgatgtggat tcctagtcac gtggggtgaa atgcataatt ttcccccttt gctggatcac 180  
 tggcctttct tcaaaaagcta taatgccatg aacacacatc ctaggagtct ctataatgtt 240  
 aacagaagct ccaaatacca agccaatcaa agatgggaga gggcagggga accataaagg 300  
 cgaagggtcc aaaggtggct gttactgaga acttgccctt tccaaaatgt gaaagtcata 360  
 gtgcttcttg cttgttctca gcttaaaactt gttaactqag ttaattttgt tcttcagtgc 420  
 attctgtgca gctgaaatgg aggggaatgt ggctaaacg gtgtangtgg angccaagtc 480  
 actgggttta gaaccgttca aggggtggca gtgggtggnc ccactggcca cagcagaagg 540  
 gggttgaccac cctgggttgg gactgggggg tncctggann cccccggatn ttgngcccca 600  
 attttaaaga agttncccca aaaacttttt aacttng 637

<210> 487  
 <211> 618  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(618)  
 <223> n = A,T,C or G

<400> 487  
 ggtacctctt cccatgactg caccagctc caggggccct tgggacagcc agagctgggt 60  
 ggggacagt ataggccaa ggtcccctcc acatcccagc agcccaagct taatagccct 120  
 cccctcaac ctcaccattg tgaagcacct actatgtgct ggggtgcctcc cacacttget 180  
 ggggctcacg gggcctccaa cccatttaat caccatggga aactgttgtg ggcgctgctt 240  
 ccaggataag gagactgagg cttagagaga ggaggcagcc ccctccacac cagtggcctc 300  
 gtgggtatta gcaaggctgg gtaatgtgaa ggcccaagag cagagtctgg gcctctgact 360  
 ctgagtcac tgctccattt ataaccccag cctgacctga gactgtcgga gaggctgtct 420  
 ggggccttta tcaaaaaaag actcagccaa gacaaggagg tanagagggg actggggggac 480  
 tgggagtcaa aacccctggc tgggggttaag tccacgtntg gcnagcactg gctttttctt 540  
 ttgggccttg gttccttgtg ggcaaagaat gatgaccnct attttcagga cttttccttc 600  
 ngttncagg tttttntg 618

<210> 488  
 <211> 618  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

&lt;222&gt; (1) ... (618)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 488

ggtacagtcg	tctgaagaag	ctctgagggc	ggcaggacca	gccagcagca	gccccagctt	60
ccctccatcc	ccctttaccc	tctttgctgc	agagaaactt	aagcaaaggg	gacagctgtg	120
tgacatttgg	agagggggcc	tgggacttcc	atgccttaaa	cctacctccc	acactcccaa	180
ggttgagacc	cagggcatct	tgctggctac	gcctcttctg	tccctgtag	acgtcctccg	240
tccatatcag	aactgtgcca	caatgcagtt	ctgagcaccg	tgtcaagctg	ccctgagcca	300
cagtgggatg	aaccagccgg	ggccttatcg	ggctccagcc	atctcatgag	gggagaggag	360
acggagggga	gtagagaagt	tacacagaaa	tgctgctggc	caaatagcaa	agacaacctg	420
ggaaaggaaa	ggtctttgtg	ggataatcca	tatgttaatt	attcaacttc	atcaatcact	480
ttatttat	tttttctaac	ttcttgga	cttaatttac	tgntttatta	gggtgaaaac	540
tggncttcta	ngtaggggtt	tnttatccca	ggactacctt	gggttttaan	ttaaaaaaaa	600
aaagaaatgg	ntnaaaaa					618

&lt;210&gt; 489

&lt;211&gt; 624

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (624)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 489

naggtcnctga	tgattctcca	natccangta	tagaatatga	nnccgnnctn	cgaaantggg	60
gtganntgat	tcctggggct	gagtatcgat	gtttatgnca	tggaaaacna	gcttattggg	120
atttctcaga	gagactacac	acaatactat	gatcatat	ctaaacagna	ggaagaaatt	180
cgcanatgca	tacaagactt	tttcaagaaa	cacatacagt	acaagctttt	ntnctattta	240
attgntgtnt	ttttttgtgg	taacnngaaa	gtttatnnnt	gtctgaaagc	ttttataagt	300
atttaaatnn	acnnagtaat	gaactattca	attgctgnaa	tcgggtcaaaa	tttncnaaag	360
ncgcacacaa	antnntatcc	ttgnncacgn	anctncatac	actgnccctn	gccaaacacc	420
cttgccggga	accaatcngc	atgacatttc	tgggccgggt	aaatnttata	aagccaaggg	480
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cttaaacntc	tggggggngg	tananatttc	ttataggnac	cgnccttcta	aatcnattgn	600
canttttnng	nccctttggg	tttt				624

&lt;210&gt; 490

&lt;211&gt; 620

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (620)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 490

ggtacctctt	cccatgactg	caccagctc	caggggccct	tgggacagcc	agagctgggt	60
ggggacagtg	ataggcccaa	ggtccctcc	acatcccagc	agcccaagct	taatagcccc	120
ccccctcaac	ctcaccattg	tgaagcacct	actatgtgct	gggtgcctcc	cacacttgct	180

ggggctcacg	gggcctccaa	cccatttaat	caccatggga	aactgttgtg	ggcgtgctt	240
ccaggataag	gagactgagg	cttagagaga	ggaggcagcc	ccctncacac	cagtggcctc	300
gtggttatta	gcaaggctgg	gtaatgtgaa	ggcccaagag	cagagtctgg	gcctctgact	360
ctgagtcac	tgctccat	ataacccag	cctgacctga	gactgtcggg	aggctgtctg	420
gggcctttat	caaaaaaaag	actnagccaa	acaaggaggt	agagagggga	ctgggggact	480
gggagtcana	gccttggtg	ggttcangtc	cacgttgggc	aggcacttgc	ttttcttttt	540
nggnctttgg	ttccttgttg	gcaaaaagag	gattgaaccc	cttattttca	agggcctttc	600
nctnatgttn	cangntttnn					620

<210> 491  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(630)  
 <223> n = A,T,C or G

<400> 491						
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cgtcactactg	agcagggtgtc	ttcaataggc	ccaaaatcac	cgtctccagg	tgccagata	180
aggctgactt	cagtgtctgat	gcaagttcct	ttttggtcct	tctctggtag	gcgaaggcaa	240
tatcctgtct	ctgtgcattg	ctgcggttgg	tcaaaatgtt	gacaatggtg	acctcatcca	300
cacctttggt	cttgatggct	gtttcaatgt	tcaaagcatc	ccgctcagca	tcaaagttag	360
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gcttgacacag	gaattccgtg	aacagtagac	attttgaagg	aagcttnctt	gaggcccaat	480
gtgttcaacc	caaccgggaa	aactnttncg	ggtagaagtg	aaatccgaag	ttgctattgc	540
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ccncttaan	gggggaattc	ccgncncng				630

<210> 492  
 <211> 412  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(412)  
 <223> n = A,T,C or G

<400> 492						
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caaggatccaa	cagactcctg	atggatccca	gcagagtcca	gatggcacac	agcttccgtc	120
tggacacccc	ttgcctgcca	caagccaggg	cactgcaagc	aatgcccctt	tcctggcagc	180
acagatgaat	cagagaggca	gcagtgtcct	ctgcaaaagc	agtcttgagc	ttcaggagga	240
tgtgcaggaa	atgaatgccg	tgaggaaaga	ggttgctgaa	acctcagcag	gccccagtgt	300
ggttagtgtg	aaaaccgatg	gaggggatcc	cagtggactg	ctgaagaact	tccaggacat	360
tatgcaaaag	caaagaccan	aaaaaaaaan	nnaaaaaaaa	aaagcttgta	cc	412

<210> 493  
 <211> 633

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(633)  
<223> n = A,T,C or G

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<400> 493
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gggctccccg tgggtccactc tgcccagagc ctgccttgaa attctgctga tatccatccc      180
gttgatagcc agagtaatcc cggggagcac tgaactgaga ctgtgtataa ccactgtttg      240
gagtgttaga gaatgaaggg cggttaaccat natatcctcc tctgaatcca ttggcagggc      300
cccgggtatcc attcatcaag cctctagcac cacgggagcc ttcacgagac gcaccacgac      360
tattgtaata ggggctgatt gctacgtgga aatncagtgt tctgctgaag aagctgctgg      420
tgggtaccag tcacttgatg ggactgggtct gggggaaccc atggtaaagt gccaaccac      480
tggttgnaac ttgtcttgct tgaanctctg gttgggtctac cttggggaag cttgactaaa      540
aaaacttttg gtataaattg ggctgggacc ccctangggg gcaaccctgg gccanntttt      600
tcctnannct taaaaagggg ggggnatgaa ggn                                633

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<210> 494  
<211> 609  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(609)  
<223> n = A,T,C or G

```

<400> 494
acttaaaagg taaagtagta accaaagaga aaatccagga agccaaagat gtctacaaaag      60
aacatttcca agatgatgtc tttaatgaaa agggatggaa ctacattctt gagaagtatg      120
atgggcatct tccaatagaa ataaaagctg ttcctgaggg ctttgtcatt ccagaggaa      180
atgttctctt cacggtggaa aacacagatc cagagtgtta ctgggttaca aattggattg      240
agactattct tgttcagtcc tgggtatccaa tcacagtggc cacaaattct agagagcaga      300
agaaaaatatt ggccaaatat ttgttagaaa cttctggtaa cttagatggg ctggaatata      360
agttacatga ttttgggtac agaggagtct cttccaaga gactgctggc ataggagcat      420
ctgctcactt gggttaacttc aaaggaacag atacagtagc aggacttgct ctaattaaaa      480
aatattatgg aacgaaagat nctgttccag ctattctggg ccacagcaga acacagtacc      540
ttggccngga cnacnctaag gcgaaatccg ccactggggg gccgttataa nggatcccnc      600
ttnggaccn                                609

```

<210> 495  
<211> 606  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(606)  
<223> n = A,T,C or G

```

<400> 495
ggtaccaagc tatctttgat aataccacta gtctgacgga taaacacctg gacccaatca      60
gggaaaatct gggaaagcac tggaaaaact gtgcccgtaa actgggcttc acacagtctc      120
agattgatga aattgaccat gactatgagc gagatggact gaaagaaaag gtttaccaga      180
tgctccaaaa gtgggtgatg agggaaggca taaagggagc cacggtgggg aagctggccc      240
aggcgctcca ccagtgttcc tggatcgacc ttctgagcag cttgatttac gtcagccaga      300
actaaccctg gatgggtctac ggcagctgaa gtggacgcct cacttagtgg ataaccacag      360
aaagttggct gcctcagagc attcagaatt ctgtcctcac tgataggggt tctgtgtctg      420
cagaaatttt gtttcctgta cctgccnggc ggncgctcaa agggcgaatt cacacactgc      480
ggccgtacta gtggatccaa ctcggaacca cttggcgtaa tatggcatac tgtttctgng      540
ggaaatgtat ccgtccaatt cncaccacata cganccganc ntaaaggtaa gcttggggcc      600
tataat
606

```

```

<210> 496
<211> 279
<212> DNA
<213> Homo sapiens

```

```

<400> 496
ggtactcaat gatgctggtc agcgacttcc acgggagaaa atcttgctga atgtccgtga      60
aatccttccc atatttttcc agggcttcct cgaaaagggtt ggcctctgat gcagaccact      120
cctccatctc gtccctgcag agcacggggc cgccctgcgg caccagcgcc gagatggcct      180
tggagatgtc gtagatgttc ttgtggagag tatccatggc gtggaacagg gtgatgtctc      240
gggaggcagc tgcggcgctc atgtgcaggc tgggctgtc
279

```

```

<210> 497
<211> 633
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(633)
<223> n = A,T,C or G

```

```

<400> 497
ggtacacaac agggcaaaag ctttttcgca agtcataaaa ttgagttgaa aataacttgt      60
tgattcagct acaggaagac aactaacaat taacaggctc atgaatattt atgaataaag      120
tgccactaat tttattgtaa taagatataa atagaataaa tcctgacatg gatagtagct      180
tctgtgttct ctccatcctg agaacagaag ggccataaaa aaacaaaagaa gcattaccaa      240
aggggagttc tagaccaca cgggggaactc ctaatacaaa agcaacaaga aagacangta      300
agactttaaa agttgcagaa gtcctaagaa tagcgccaat gtagtaggcc ctttttaaca      360
acaacaaana ataaaaataa gagagagaga gaaattagaa atttangaag ttcattaaat      420
aactgggtact tatattcaag ggaatttatt agtggccagc ctantggggg acccagcntn      480
taggaaaaga cccttgaaaa ggaccttccc ncacctggga canaaggata gnaccgaccc      540
cccagggaag nccgcctcgg aaangggatc cnaacttgan gcttttttagg gtttcaaaan      600
tccttgctng gcccgaang gcaggntttn ntn
633

```

```

<210> 498
<211> 601
<212> DNA
<213> Homo sapiens

```

<220>  
 <221> misc\_feature  
 <222> (1)...(601)  
 <223> n = A,T,C or G

<400> 498  
 acattcttca gaacagtttt ggtcgtttta aaaaaatcac acattttataa gcagtgattt 60  
 caatcatgtt taaaaacaaa aatattaaac aaattcattt cctaataccag atgatacaga 120  
 atccaagaaa tttctgtagg cacttcactt tccatagaac ttcttggtca gcaggatat 180  
 gagaagggtt acattcactt taaccttatc aaacattttc attacagcta ctcttccata 240  
 ttgcatctga agtaaactct gaattattgag ttgcacctt tccatctcaa caccaaggaa 300  
 ttttgatctt acatcgaaaa tgctacatc ttcagtagct atgatatcaa atgtaacatt 360  
 cttaaactgg tttgtttgaa gatcatctat atctagcagg acacctttct catgcagctt 420  
 tgctgcagtg tacaaactgc aggtccatc ctctgtgggt cgcactatgt gcgcttttaa 480  
 aaaaattatt ttctaataaa tctttgaagt taaaataccg ttctttcagt tggnccaaaa 540  
 aaaaannnnn nnnanganag aanngnaang aaagtggggt gnnnttgggg nggaaaaacn 600  
 n 601

<210> 499  
 <211> 293  
 <212> DNA  
 <213> Homo sapiens

<400> 499  
 ggtactcaag cttttgacct catgccttgt gtagtaaaaa aggatttggg ggttttgttt 60  
 ggttcctgag aggggtgtgt tttgtttttg tttccttttg tttatgtttt ggcctttcct 120  
 ctttgtcttt ccatgtagac cagatatttg aaagggcaga cgatggctag aggtgtaatg 180  
 tgcagcttgt ttatacggta ttttgggaaa cttaccttgg atgggaaatc gaatcgtgga 240  
 ttcaccaggc cgggtgctggc acactcacc tcgccctttc cctccggttc agt 293

<210> 500  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(630)  
 <223> n = A,T,C or G

<400> 500  
 ggggtactcat gaattcaagc cacagagtgg agcagagatc aaagaagggt gtgaaacaca 60  
 taagggttggc aacacaagtt cttttcacac aactccaaac acatcactgg gaatggttca 120  
 ggcaacgcca tccaaagtgc agccatcacc caccgtgcac acaaaagaag cattagggtt 180  
 catcatgaat atgtttcagg ctctacact tctgatatt tctgatgaca aagatgaatg 240  
 gcaatctcta gatcaaaatg aagatgcatt tgaagcccag tttcaaaaaa atgtaaggct 300  
 atctggggct tggggagtca ataagatcat ctcttctttg ncatctgctt ttcattgtgt 360  
 tgaagatgga aacaaagaaa attatggatt accacagcct aaaaataaac ccacaggagc 420  
 caggaccttt ggagaacgct ctgtcacaga cttncttcaa acccaaggag gaagtgcctn 480  
 atgctgaaaa gttttggatg actcaactgg atgggggtatt ccctgnaacc aaaacctggn 540  
 acccaagtcc ttaaaaancn nggagactta cattntgntg nacaatttgg gttaaaccnn 600  
 ttcncaaagc tttccatggg ggcangggcc 630

<210> 501  
 <211> 240  
 <212> DNA  
 <213> Homo sapiens

<400> 501  
 acatctgaaa tcccccccaa acccagaaag cttttcaaca gctaggttgt ccaagaactt 60  
 ggaaaattca cttctgatg tcctccaaga cagattccat tttttatata ctttatttgc 120  
 tcagacctgt aacttcagcc tggagtgaac acagacacct agttttcctc aaactcctct 180  
 tgggcttttag agagaagggtg ctggcccttt gagccaagca ggttattggg tagtagtacc 240

<210> 502  
 <211> 481  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(481)  
 <223> n = A,T,C or G

<400> 502  
 ggtacctgtt cttctatcca aacctttcaa ttcattgctac ctgattcatt tatttgacat 60  
 agatcttagg ccacttgaa ctcttttctt gtttatctag catagcacia acgtttttcc 120  
 agtcttcttt atcaacacta atgctcttta attgcatcag tatttcctat tggaaaatac 180  
 atctgttcca gaaaaacatt tggcattcct gaataatttc caaatgtttt taatccaaag 240  
 aaaaagggtt aaagcttatt tccctttctt atacacacct gaataaaaatt gatgtgcatg 300  
 ttttagggat caattaccta actgttcctt ggtctattta tgtataagaa tgctttttta 360  
 agcacatgtc tcatttttaa tgacgcacia actgaagatg ttaataaaaat ttaagagtaa 420  
 tacaatgaaa aatattantn ttnnanatan aaaagcttgg acctgccngg gcggccgntc 480  
 g 481

<210> 503  
 <211> 643  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(643)  
 <223> n = A,T,C or G

<400> 503  
 ggtactgcat tatttgagaa gctgctcaac ttgcaaaatc agttttcctc tcaataaaaat 60  
 tatagctcta atgtttgcat ataagggaag tagttatcat gtttagtaata cctctaatag 120  
 tataaaccac accccaaaat tagccagtaa tcctgtagga aggtacaagt ctgagactaa 180  
 gtttttagcc acttgtcaaa ttcagtttta aatgcttaga aaacactgag gacacctatt 240  
 gaggagggag gggggaaggc cacctgtaaa ggagtccaaa gtatgtgctg gagcagatga 300  
 tgacaaagac agaacatcca agaagataga catggaggaa agggagtagt atttccacac 360  
 actatgacat tgaaaattca atcatttatg ataggatttt gatccactgc cattactacc 420  
 ttgtgggaaa aatctnccaa tgaaaagggt gaaaaattca ttctccaaaa attggcccng 480  
 ttttaangag aaaatttttag agcagcaccn ttaaaccatg ccgggaactt tggtttaaca 540



aaatatngtg gggcccaaaa aagctcctgt tgcttttagg cctcnagaga tttaccaga 600  
acttaaaggn ttncnctggc cttgttcctt aangttgaaa acc 643

<210> 504  
<211> 624  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(624)  
<223> n = A,T,C or G

<400> 504  
ggtactgcat tatttgagaa gctgctcaac ttgcaaaatc agttttcctc tcaataaaat 60  
tatagtctcta atgtttgcat ataagggaag tagttatcat gtttagtaata cctctaatag 120  
tataaaacccc accccaaaat tagccagtaa tcctgttaga aggtacaagt ctcagactaa 180  
gttttttagcc acttggtcaaa ttcagtttta aatgcttaga aaacactgag gacacctatt 240  
gaggagggag gggggaaggc cacctgtaaa ggagtccaaa gtatgtgctg gagcagatga 300  
tgacaaaagac agaacatcta agaagataga catggaggaa agggagtagt atttccacac 360  
actatgacat tgaaaattca atcatttatg ataggatttt gatccactgn ccattactac 420  
cttgtgggaa aaatccttca caatgaaaag ggttgaaaaa ttcattcttc caaaattggc 480  
ccnngtttta aggagaaaat nttagagccg ccccttaanc ctgcccggaa cttggnttta 540  
ccaaatntca gggngncccc aaaancttct gntgccttta ngncntncaan agacttnacc 600  
cnngaacttc naggntttnc ctng 624

<210> 505  
<211> 652  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(652)  
<223> n = A,T,C or G

<400> 505  
acaagctaca aatgcttggt cagcagctga ggggcactct tgagtagcgt gtctgaagag 60  
tgaataaaaa tccatataaa acaaattatc aaatagtttc cataggaaca cagataagtg 120  
tgacccatat cctagtcttc catatggctg catcatggcg accctactct taaaaagaca 180  
tttcaaaact agcagtaatt aagttacatg gtccccccaa atcccttaat tcaagctaaa 240  
cttgacgtta acagctacca gagtgtctatc tacacattaa tactagcccg aagcacaggc 300  
tgctctgtgg cgtttcatcc cactctccca ggcacaagac acaggcaggg tgctggcatc 360  
ctgttctctc acttcgggtg gggaaagtcg gggttctgga attgctgcat gagttgccac 420  
gcaggccctg acatcacata gtaanatcgt ccggcctttt gggaaaccca ttgnacctan 480  
aaggcancna gcaaccagtg gtaagccgcc ccaaggtttt cnaaagagcc tttccaatna 540  
cccccatgc cnttttaang gcnnnggttac caagggttn aaaaaatccg atttnanggg 600  
cctttacaag gttggggccc ccanaatgcn cggatngnaa aaaanacctt tt 652

<210> 506  
<211> 545  
<212> DNA  
<213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(545)  
 <223> n = A,T,C or G

<400> 506  
 acaagctttt tttttttttt tttttttttt tttttttatc taaaagtgcc caggtgggct 60  
 taaggctgcc anactgcacg cacatctaca gcaacaaggg cttctattcc atctacaact 120  
 tggatcgggg gaaaaggag atgtaggaga ggaaggaaaa aagaggggaa aaatatacca 180  
 ccaaccctcc cccacaaaaa aagggaaaaa aaaaaatccc accacaggga gatctatgtg 240  
 ccaagcataa tggaagagtg tgctcccaa acagatggtt ttgcacaggc taatgttctg 300  
 ctggttttcc ttagagacct attttgaata agtttaaaaa gacaggagat ttcaaaataa 360  
 ttcaatcctg gcagaaattc aaactccaaa actaggagca aaatcatcct tcaactgaatt 420  
 aattcctttt ctctttctct tttcttaaac atttttattca ttttatagaa agatttcttt 480  
 ttttgngtgc ntttgggtcca atcntttgga nantggttga aggagtacct tggmcngnan 540  
 ccccc 545

<210> 507  
 <211> 625  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(625)  
 <223> n = A,T,C or G

<400> 507  
 acctgtctct ctgccttctg gaggtctctt aggattggaa aagttcaaga aacccgaggg 60  
 aagctgggac tgtgaattgt gcctagtcca gaataaggca gactctacca aatgtttggc 120  
 atgtgaaagt gcaaagccag gcacaaaatc tgggtttaaa ggctttgaca catcttcctc 180  
 atcttcgaac tcagcagcct cctcatcctt caaatttggg gtctcatcat cctcttctgg 240  
 gccttctcag actttaacaa gcaactggaaa ttttaaatat ggagatcagg gaggattcaa 300  
 aataggtgtg tcatctgatt ctgggtctat aaaccccatg agtgaaggct ttaaattttc 360  
 taaaccaata ggagatttta aatttggagt ttcactctgaa tctaagcccg aagaagttaa 420  
 aaaagatagt aagaatgata atttttaagt ttggacttct ttggtttaac caccagttt 480  
 ctttaacttc atttcaattg gggtatctaa tcttggacag gaagaaaaag aaangangaac 540  
 ctggcccaaa tctttcctnt gcaggnttta nccttnggac ccttggccgc naaccaccct 600  
 aaggggggaa ttccnnacac tgggg 625

<210> 508  
 <211> 612  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(612)  
 <223> n = A,T,C or G

<400> 508  
 ggtcgaagac agaggttcag gtcgttccag gggtagagga ggcattgaagg atgaccgtcg 60

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ggacagatac tctgctgggca aaaggggtgg atttaatacc tttagagaca gggaaaatta 120
tgacagaggt tactctagcc tgcttaaaag agattttggg gcaaaaactc agaatgggtgt 180
ttacagtgtc gcaaaattaca ccaatgggag ctttgggaagt aattttgtgt ctgctgggtat 240
acagaccagt tttaggactg gtaatccaac agggacttac cagaatgggt atgatagcac 300
tcagcaatac ggaagtaatg ttccaaatat gcacaatggg atgaaccaac aggcataatgc 360
atatcctgct actgcagctg cacctatgat tggttatcca atgccaacag gatattccca 420
ataagacttt agaagtatat gtaaagtncg ggttttcata attgctcttt atattgggng 480
gtatctgacc agatagtatt ttaagaaaca tgggaattgc anaaatgact gnagtgc aan 540
agtaattntn gggcactttt cgtttttaag ntggaaattc nctacanttc ctgaaccant 600
ttanggtttt tt 612

```

&lt;210&gt; 509

&lt;211&gt; 473

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (473)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 509

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cttgggtctg aaagtctgat aaggacgcga ttacctgcga taagcttcgt ggagttggaa 60
ataaactatg atacggagat ttccgaatgg ggtaacctaa ctgagcaaac ctgagttgca 120
ttttgatgaa tccatagtca aattagcgag acacgttgcg aattgaaaca tcttagtagc 180
aacaggaaaa gaaaataaat aatgatttcg tcagtagtgg cgagcgaaag cgaaagagcc 240
caaacctgta aaaaggggtt gtaggacatc ttacattgag ttacaaaatt ttatgatagt 300
agaagaagtt ggaaagcttc aacatagaag gtgatattcc tgtatacgaa atcataaaat 360
ctnatagatg tatcctgagt agggcggggc accgtgaaac cctgtctgaa tctgccggga 420
ccaccccggt aaggctaata ctaatcanac accgatagtg aactagtacc tng 473

```

&lt;210&gt; 510

&lt;211&gt; 632

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (632)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 510

```

ggtacctatg tggattccaa gagcctgata gcattcttgt ccttcagagc ctccctggca 60
aacaattacc atcacacaaa gccatacttt ttgtgcctcg gcgagatccc agtcgagaac 120
tttgggatgg tccgcgatct ggcactgatg gagcaatagc tctaactgga gtagacgaag 180
cctatacgct agaagaattt caacatcttc taccaaaaat gaaagctgag acgaacatgg 240
tttgggtatga ctggatgagg ccctcacatg cacagcttca ctctgactat atgcagcccc 300
tgactgagggc caaagccaag agcaagaaca aggttcyggg tgttcagcag ctgatacagc 360
gcctccggct gatcaagtrt cctgcagaaa ttgaacgaat gcagattgct gggaagctga 420
catcacaggc tttcatagaa accatgttna ccagtaaaag cccctgtgga agaaccnttc 480
tttatgctaa gtttgaaattt gaatgcccgg ctgctggcgc agacatttta acctattcan 540
cttgtgggtg cttggnggta attcggncca aacactttgc ncttttgtga aaaaaaatcn 600
cctcttcang gttggggnaa nggggctttt gg 632

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<210> 511  
 <211> 616  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(616)  
 <223> n = A,T,C or G

<400> 511  
 acagaaaccta aaggtttcac tgaatgcgaa atgacgaaat ctagcccttt gaaaataaca 60  
 ttgttttttag aagaggacaa atccttaaaa gtaacatcag acccaaaggt tgagcagaaa 120  
 attgaagtga tacgtgaaat tgagatgagt gtggatgatg atgatatcaa tagttcgaaa 180  
 gtaattaatg acctcttcag tgatgtccta gaggaagggtg aactagatat ggagaagagc 240  
 caagaggaga tggatcaagc attagcagaa agcagcgaag aacaggaaga tgcactgaat 300  
 atctcctcaa tgtctttact tgcaccattg gcacaaacag ttggtgtggt aagtccagag 360  
 agtttagtgt ccacacctag actggaattg aaagacacca gcagaagtga tgaaagtcca 420  
 aaaccaggaa aattccaaag aactcgtgtc cctcgagctg aatctggtga tagcccttgg 480  
 ttctgaagat cgtgacttct ttacagcatt gatgcatata gatctcaaag attnanagaa 540  
 acnggaatgt ccatcaataa acnagggtgat tgttnggaag gaagatgttc tttttaaaaa 600  
 tnaatgtttt atntng 616

<210> 512  
 <211> 619  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(619)  
 <223> n = A,T,C or G

<400> 512  
 ggtaccggtc tttctcaa atcatcagca ccctcaatcc cactgctaaa cgacatttgg 60  
 tcctcgcttg ccactatgac tccaagtatt tttcccactg gaacaacaga gtgtttgtag 120  
 gagccactga ttcagccgtg ccatgtgcaa tgatgttgga acttgctcgt gccttagaca 180  
 agaaaactcct ttccttaaaag actgtttcag actccaagcc agatttgtca ctccagctga 240  
 tcttctttga tggatgaagag gcttttcttc actggtctcc tcaagattct ctctatgggt 300  
 ctcgacactt agctgcaaag atggcatcga ccccgacccc acctggagcg agaggcacca 360  
 gccaaactgca tggcatggat ttattggtct tattggattt gattggagct ccaaacccaa 420  
 cgtttcccaa tttttttcca aactcagcca ggtggttcga aagacttcaa gcaattgaac 480  
 atgaacttca tgaattgggt tgcttcaagg atcactcttt tggaaggggcg ggatttnccg 540  
 aaatacnggt tttggaggng tgaatcaggg atgacctat tcccttttta anaaaaaggg 600  
 gttcccntnt gcntntggn 619

<210> 513  
 <211> 175  
 <212> DNA  
 <213> Homo sapiens

<400> 513

ggtacatcct	cggccgggag	tccccactgt	ctctctacaa	tgaggagctg	gtgagcatga	60
acgtgcaggg	tgattatgag	ccaactgatg	ccaccgggtt	catcaacatc	aattccctca	120
ggctgaagga	atatcatcgt	ctccagagca	aggctactgc	caaatagacc	cgtgt	175

<210> 514  
 <211> 597  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(597)  
 <223> n = A,T,C or G

<400> 514						
actagttact	gcatctgatt	ttacagacag	agaagagtca	aggcccagag	agcagacagc	60
tcaccccaac	atcacacagc	agtcagctgc	gaggggcttg	gtgctactca	gatttctcct	120
aagaatgttt	ggaaacaacc	tgaggggagag	ttaagtaata	aaggaaaatc	acaaacagag	180
acagagaccc	agaaagggac	tcacgggaat	aaaagca	agtgcagag	atacatagag	240
atgatgagac	agagacagag	agatcagaga	tagggttcag	aaaaaaagaa	gagagaggct	300
gggcacagtt	gctcacgcca	gtaatcccag	cactttgaga	ggcggagatg	ggaggatctc	360
ttgagcccag	gagtttgaga	ccagcctgga	cagcatagta	agaccccatc	tttattttaa	420
aaaaagtttt	attaatttaa	aaaaaatgcc	nagagayata	acccccnta	gaagggttga	480
aagccaaaag	ctttttgggg	gcttaaaagn	accccaaccc	ggnccnggga	ganaggtttt	540
tttttgaggg	aanaatccgg	ttcttggcc	ngcttaannng	gcctatttcc	aaaaaac	597

<210> 515  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(574)  
 <223> n = A,T,C or G

<400> 515						
ggtacactgg	ttgatatgaa	gattgaattt	ggtgttgatg	taaccaccaa	agaaattggt	60
cttgctgatg	ttattgacaa	tgattcctgg	agactctggc	catcaggaga	tcgaagccaa	120
cagaaagaca	aacagtctta	tcgggacctc	aaagaagtaa	ctcctgaagg	gctccaaatg	180
gtaaagaaaa	acttttgagt	ggttgacagag	agagtagagt	tgcttttgaa	atcagaaagt	240
cagtgcaggg	ttgtagtgtt	gatgggctct	acttctgata	ttgggtcactg	tgaaaaaatc	300
aagaaggcct	gtggaaattt	tggcattcca	tgtgaacttc	gagtaacatc	tgcgcataaa	360
ggaccagatg	aaactctgag	gattaaagct	gagtatgaag	gggatggcat	tcctactgta	420
tttgtggcag	tggcaggcag	aagtaatggt	tngggaccag	tgatgtctgg	gaacactgca	480
tatnccgtta	tnagctggcn	tcncttanac	caactgggga	agttcaggat	gtgtgggctt	540
ctctttgact	nccaatggnc	ttggctntca	accn			574

<210> 516  
 <211> 450  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(450)  
 <223> n = A,T,C or G

<400> 516  
 aaaaaggcgt aaagcggaaa gcagatacta ccacccctac acctacagcc atcttggtc 60  
 ctggttctcc agctagccct cctgggagtc ttgagcctaa ggagcacgg cttcccccta 120  
 tgcgtagaga gagtggtcgc cccatcaagc cccacgcaa agacttgct gactctcagc 180  
 aacaacacca gagctctaag aaaggaaaagc tttcagaaca gttaaaacat tgcaatggca 240  
 ttttgaagga gttactctct aagaagcatg ctgcctatgc ttggcctttc tataaaccag 300  
 tggatgcttc tgcacttggc ctgcatgact accatgacat cattaagcac cccatggacc 360  
 tcagcactgt caagcgggaag atggagaacc gtgattaccg ggatgcacag gagtttgctg 420  
 ctgatgtacc tcgggcgcga acacgcttan 450

<210> 517  
 <211> 611  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(611)  
 <223> n = A,T,C or G

<400> 517  
 actcctctga ggactacatt aagtcaggag ctcttcttgc ctgtggcata gtgaactctg 60  
 ggggtccgga tgagtgtgac cctgctctgg cactgctctc agactatgtt ctccacaaca 120  
 gcaacacccat gagacttggg tccatctttg ggctaggctt ggcttatgct ggctcaaatc 180  
 gtgaagatgt cctaacactg ctgctgcctg tgatgggaga ttcaaagtcc agcatggagg 240  
 tggcaggtgt cacagcttta gcctgtggaa tgatagcagt agggctcctgc aatggagatg 300  
 taacttccac tatccttcag accatcatgg agaagtcaga gactgagctc aaggatactt 360  
 atgctcgttg gcttctctct ggactgggtc tcaaccacct ggggaagggt gaggccatcg 420  
 angcaatcct ggctgcactg gaaggtgngc anaacnnttt cgcanttttg nccacacacc 480  
 tggnggatgt gtnggcctat tcncgctttt ggnanatgcc tnaagggcna caaattggtc 540  
 caatttgnnn nnaacctttg cctccaaaga aaggggggaaa naaaagtttc ccccnanngg 600  
 gggcggggccc c 611

<210> 518  
 <211> 395  
 <212> DNA  
 <213> Homo sapiens

<400> 518  
 ggtgatttat ctaatcagaa ctcttcagat caggcaaattg aagaatggga aacagcttct 60  
 gaaagcagtg atttcaatga gaggcgagag agggatgaaa aaaaaaatgc tgacttgaat 120  
 gcacaaacag ttgtaaaggt tggagagaat gttctacctc caaagaggga aattgcaaag 180  
 agaagttttt ctagtccagag accagtagat cgtcagaatc gacgtggcaa caatgggtcca 240  
 cccaaatcag gaaggaattt ctcaggtcct agaaatgaaa ggagaagtgg cccaccatca 300  
 aaaagtggga agagagggcc tttgatgac cagcctgcag gcacaactgg ggttgacctc 360  
 atcaatggca gctctgcaca ccatcaggaa ggagt 395

<210> 519

<211> 626  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (626)  
 <223> n = A,T,C or G

<400> 519  
 ggtaccgaaa gcacagtaat cactggtgtc gatattgtca tgaaccatca cctgcaggaa 60  
 acaagtttca caaaagaagc ctacaagaag tactgatttt aaaaactaat aacttaaaac 120  
 tgccacacgc aaaaaagaaa accaaagtgg tccacaaaac attctccttt ccttctgaag 180  
 gttttacgat gcattgttat cattaaccag tcttttacta ctaaaactta atggccaatt 240  
 gaaacaaaca gttctgagac cgttcttcca ccactgatta agagtggggt ggcagggtatt 300  
 agggataata ttcatcttagc cttctgagct ttctgggcag acttgggtgac cttgccagct 360  
 ccagcagcct tcttgccact gctttgatga caccaccgc aactgtctgn ctcatatcac 420  
 gaacagcaaa gcgacccaaa ngtggatagt ctgagaagct nttcaacaca catnggcttt 480  
 gccaggaanc nttntacca tgggagcmtt ccngacttt tagnaaatta agggcmtttt 540  
 tcacttttta acccaaacgg ggaaaaattt ttncctttaag ttaanaaact tgcnntgcaa 600  
 tggaanccgn ngggaatcca atacgg 626

<210> 520  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

<400> 520  
 ggtaccceaag catctagtct ggaactgaca gagataaata gagaaaatgt tccaaagtct 60  
 ggcacgcccc agcttaggct gccattcgct gcaagggtga acaccccat gggccctgga 120  
 cgaactgtcg tcgttaaagg agaagtgaat gcaaatgcca aaagcttta tggtgaccta 180  
 ctagcaggaa aatcaaagga tattgtctta cacttgaacc cacgcctgaa tattaagca 240  
 tttgtaagaa attcttttct tcaggagtcc tggggagaag aagagagaaa tattacctct 300  
 ttcccattta gtcttgggat gt 322

<210> 521  
 <211> 613  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (613)  
 <223> n = A,T,C or G

<400> 521  
 ggtaccatcc tcatctcggt gggatgtgca gttttctgtg cccttatcgt ctgggtcttt 60  
 gtatgtccca ggatgaagag aaaaattgaa cgagaaataa agtgtagtcc ttctgaaagc 120  
 cccttaatgg aaaaaaagaa tagcttgaaa gaagaccatg aagaaacaaa gttgtctgtt 180  
 ggtgatattg aaaacaagca tctgttttct gacttagggc ctgccactgt gcccctccag 240  
 gctgtgggtg agggagagaa agtctcatte aaacttggag atttggagga agctccagag 300  
 agagagaggc ttcccagcgt ggacttgaaa gaggaacca gcatagatag caccgtgaat 360  
 ggtgcagtgc agttgcctaa tgggaacctt gtccagttca gtcaaagccg tcagcaacca 420

aataaaactnc	agtggccact	accagtatca	caccgtgcat	aaaggattcc	gggctgtanc	480
ttgcccggcc	ggccgtntaa	aggcgaattc	cagncacttg	ggggccgntc	taaagggatn	540
ccactttggn	ccaacnttgg	gggaatctng	ggcaaantng	tccctgngna	aatggtatcc	600
gtcaaattcc	cnn					613

<210> 522  
 <211> 319  
 <212> DNA  
 <213> Homo sapiens

<400> 522						
accagggagg	catgacattg	cttttgttga	atttgaaaat	gatgggagg	ctggagctgc	60
cagggatgct	ttacagggat	ttaagatcac	accgtcccat	gctatgaaga	tcacctatgc	120
caagaaataa	catttgggat	agtcgtcttt	aaaagacttg	gtgttattta	cagtgtttgt	180
tttgataaca	tttggtctggg	tcattttaat	agtttagagat	gaggaggagt	aaaagtgaac	240
tttttgtgaa	ggacttaaat	tatccagtgt	ttcttttagcc	ttggtgaact	atgaaatacg	300
aagcccttaa	ttttgtacc					319

<210> 523  
 <211> 589  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(589)  
 <223> n = A,T,C or G

<400> 523						
acagcgcgcg	gctctacacg	cttgggtagc	gggataagtc	actgttttct	ttattttcttt	60
aaaaaaaaaa	aagttctgtt	gcaaacgact	gctgttggat	tctgagggtg	gggagggaga	120
gagagggagg	gagagggagt	gaagagcctg	ccctcctata	tggattcttc	agggccctcc	180
acatctgagg	tggctcattc	ccatcacaca	cagattgtcc	tgggtgttcat	ttcaaggcca	240
gtgttcagca	gcagcgtttg	gaaagcaggt	tctgtgggac	cccccgcccc	gccccacac	300
tccttcacag	cagcagtagt	ggcttctcca	tcctgntttc	tgcaacattc	tatacaaaac	360
tgtgctgtga	ccttgcggtg	agcctggatc	tggaagagag	aatcaaatga	aaccctttct	420
ttctcttttc	gtccacaact	ctgtanaact	ntntgnaccc	ttaccctttt	ccaccttttg	480
gattnaattt	taaggccgtg	nanctttggc	cggaaacccc	ttagggcnaa	ttcnnnccat	540
tggggggcgt	ctaagggann	ccaattggnc	caanttgggn	aacanggnn		589

<210> 524  
 <211> 621  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(621)  
 <223> n = A,T,C or G

<400> 524						
ggtacattgg	agagatctcg	cctactgccc	tgcgggggtg	ctttggcact	ctcaaccagc	60
tgggcatcgt	tggttgaatt	ctggtggccc	agatcttttg	tctggaattc	atccttgggt	120



ctgaagagct	atggccgctg	ctactgggtt	ttaccatcct	tcctgctatc	ctacaaagtg	180
cagcccttcc	attttgccct	gaaagtccca	gatttttgct	cattaacaga	aaagaagagg	240
agaatgctaa	gcagatccct	cagcggttgt	ggggcaccca	ggatgtatcc	caagacatcc	300
aggagatgaa	agatgagagt	gcaaggatgt	cacaagaaaa	gcaagtcacc	gtgctagagc	360
tcttttagagt	gtcagctacc	cgacagtcca	tcattcattc	cattgtgctc	cagctctntc	420
gcagcttctt	gggatcaatg	ctgngttcta	atactcacca	ggaatcttca	aggatgcagg	480
tggttaaaaa	nccattttat	gccncttttg	ggcccggtgn	gggtnaaacc	anacttnccn	540
nggaggnncc	tnttttnnng	ggggaanggc	cngaaaaaag	gncttcgcct	ttaaanngcc	600
cttgaggga	agnttttttt	n				621

&lt;210&gt; 525

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 525

acagcacttt	gagaggacat	cactagacaa	gtaatacaca	catggcctgc	aggaggtcaa	60
gggcgccgag	ggggctgggc	aggggacatt	tttgtgactt	ccactgttat	tatatattcac	120
gacaacagca	gcagcacaaa	tgggtgtgctc	accactggag	aatgagagct	gctgagtctt	180
gaggatggcg	agacagcctt	cctgcatttg	ctgctttagt	ttctgcttta	gagctaagtt	240
ttatacagag	aataaaatga	ccatcttctc	ttacaaacac	gatgatgtat	gacccacac	300
aacacaaggt	attatgaagt	atctgaaact	gaggataatc	tgactgaaga	tgcttgccga	360
gagggtacct	cggccgcgcc	acgc				384

&lt;210&gt; 526

&lt;211&gt; 621

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(621)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 526

actgtagctc	cccatgagat	gtgatgagta	tgccttcacc	cttgggtgtca	tactggggtc	60
ttccggcacg	tcccagcatc	tgcagaatgt	ccagtgtctc	cagttctgtc	caacgccct	120
tctctggact	gtacaatgtc	actgacggat	cctgccagct	gtttgtgtat	gggggctgtg	180
acggaaacag	caataattac	ctgaccaagg	aggagtgcct	caagaaatgt	gccactgtca	240
cagagaatgn	cangggtgac	ctggccacna	gcangaatgc	agcggattcc	tctgcccag	300
tgcttnagaa	ggcagnattc	tgaagactac	tncagcgata	tgttcaacta	tgangaatac	360
tgcacngtna	accgcattna	ctgggnnttg	ncngtgcac	cttcnacgct	ggtaccttcg	420
gcccgggacc	acgcttaagg	gcgaatncan	gnactactgg	ccgggtcgtt	actantngaa	480
tccgagnttc	gnnaccaagc	tttgcgtaaa	atattgggca	taagttggnt	ttctgngnga	540
aaaatggtan	atcngttnan	aattcccnaa	tatatncanc	cngtnccttt	aattntaaat	600
ccgggggttn	taantnantn	n				621

&lt;210&gt; 527

&lt;211&gt; 611

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

<221> misc\_feature  
 <222> (1)...(611)  
 <223> n = A,T,C or G

<400> 527  
 acagctcatc cacttccctca tctgtaaacc gatcccccat ggttgctcagc agctctcttta 60  
 ggtaaatcttc ctgaatgggtg cctggttgctt cttcatcaaa gcaagcaaag gcgtttctga 120  
 tgacatcttc aggatctgtg ccattttaact tctcaccaaa catggtcagg aacatgggtga 180  
 aattgatggg ccctggggcc tcattcatca tggatcaag gtatgcatca gtgggattct 240  
 tccctagaga agcaagcata tcatgcaaat cttccttgtc gatgaagcca tctctgttct 300  
 gatcaatcat gttgaaggcc tctttgaact cctgaatctg tgattgggtca aacatggcaa 360  
 acacattgga tgttgcacgc tgagggcgct tcttggtggt cttggtcttt gcctttttgc 420  
 ttcgacatgg tggntgggta attncgacgc ccaaacacca gaaccggggg ccancctgcg 480  
 cganaacgca accaaaacct tnggccggaa cacccttaag gggaaatccc nncactgggg 540  
 ggccgtataa nggganccna nttnggacca aacttggnngg aaaaangggc aaaanngttc 600  
 ctgnggaaan n 611

<210> 528  
 <211> 593  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(593)  
 <223> n = A,T,C or G

<400> 528  
 acaagctttt tttttttttt tttttttttt taggtagtgg gtggtgagct tgaacgcttt 60  
 cttaattggt ggctgctttt aggcctacta tgggtgttaa attttttact ctctctacaa 120  
 ggttttttcc tagtgtccaa agagctgttc ctctttggac taacagttaa atttacaagg 180  
 ggatttagag ggttctgtgg gcaaatttaa agttgaacta agattctatc ttggacaacc 240  
 agctatcacc aggcctcggtg ggtttgtcgc ctctacctat aaatcttccc actattttgc 300  
 tacatagacg ggtgtgctct tttagctgnt cttaggtagc tcgtctgggt tcgggggtct 360  
 tanctttggc tctccttgca aaggtatttc tagntaatc attatgcnaa aagnatangg 420  
 gtaagccctg ctatataagc ctgggtataa attttcancc tttcctttgn ggaccctnng 480  
 ccggaacacc ctaaggggcg aatccancca ctggggggcg tactaaaggg atcccaactt 540  
 gggnccaact tggnnnaaac cggggcanaa nngtcctctg ggnaaatggn anc 593

<210> 529  
 <211> 251  
 <212> DNA  
 <213> Homo sapiens

<400> 529  
 accattggtg gccaatgat ttgatggtaa gggagggatc gttgacctcg tctgttatgt 60  
 aaaggatgcg tagggatggg agggcgatga ggactaggat gatggcgggc aggatagttc 120  
 agacggtttc tatttcctga gcgtctgaga tgtagtatt agttagtttt gttgtgagtg 180  
 ttaggaaaag ggcatacagg actaggaagc agataaggaa aatgattatg agggcgtgat 240  
 catgaaagac c 251

<210> 530  
 <211> 601

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(601)  
<223> n = A,T,C or G

<400> 530  
acagtataaa atgtttccat aggaacacaa aagaaactgt cactagtggc ctgctgtcag 60  
atggcttcta attcatcagt tagccatttt taggacacta gtccagctta ttgctacaat 120  
cttcaagttg ttctagtcac ccaaattata atgaattcaa tgtataccag aattttaccaa 180  
taaaggctca aagagttata taatatacac caatatacac aaaacagcta ttctgagtaa 240  
aatgaatatt ccatacttaa ataagaacca agaatagtaa ttttaggcta ctctattatc 300  
cttgtgattg gtatttttaa aattttgagc aaagtgcaca gtgaatgaaa cagtcagcag 360  
acacgatcct tctgtgaact ctcaaattcc tgccttagaa tcacgtcacc tgagaaatga 420  
gaacctttga gacctggtgc atatcaaata gcttcacatg tcaaaccaca ggggccgctt 480  
ggangccatt ctngggcaca ggangncaac tggttcnttn aaaatggnnn ccttnccctgt 540  
gcangggccc gtgttaaag gcccacaaac cggcctcngg ggaaacaagg ttgntaatta 600  
a 601

<210> 531  
<211> 607  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(607)  
<223> n = A,T,C or G

<400> 531  
ggtacaagct tttttttttt tttttttttt ttttttttct cagccttggg tttcttctta 60  
gcttccttct gctttaagct cttgggtctct tgtttccgct natttctggc ctgcccttgg 120  
atagtagtct gacactctcc ccgttgaacc ttctgcctca tcttcttctt gcttttagca 180  
atctttgctt tatectctc attcaatgtt tcttgggcct ccagtttctt tagggggcgg 240  
ttgtctgtct tgttcaatag ctcaagtatt ttgaccttag gtggccgacc tcgaccccg 300  
ttcaccttgg ggacttctct agtcttagcc ttctcagtgt ttcaaggctc accccgcttg 360  
ccagtaattg cctgaatcct cgacgggatc tcctctgctg aaagctgcac ccactgcaag 420  
ccctttggcg ngnetctttt cttcaaagaa atctccaaca nggcatacgg ggactgaanc 480  
ttaanngctt nttggnggaa actgggnacc tggccgggca ngggcctntg ttttacctnc 540  
tggnaatnaa aagggaaaat ncaaaaanttt accctnttna ccnngttntt ggggtngggg 600  
gaaaang 607

<210> 532  
<211> 608  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(608)  
<223> n = A,T,C or G

```

<400> 532
gg tactgaac ag gtaag tca tccctcagcc ag agattagt ctacttcttc catgcgtgat      60
gtgtcgtcat ct ccttcaag ggggtggcatt tcttcagtta cagcagcact ggtatcatca      120
gcagtaggggt catcttcatc aataccacaga ccaagtttga tcatcctgta gatcctgtta      180
gcatgtgtct ggggatcttc cagactgaag ccagaagaca ggagcgcagt ttcataaagc      240
aagatgacca gatccttcac agacttgctg ttcttatcag cctctgcctt ttgccttaag      300
gtctcaataa tggaatgggc aggggtttatc tccaggtgtt tctttgctgc catgtaaccc      360
attgttgagt ngctcttagg gcttgagctt tcatgattcg ctccatgttt gctgtccagc      420
catatgtgct tnggacaatc agcatggaaa ntcaccaatc cgggttgacac aaccacnttt      480
cactttttct ccaaanngcc tttcatgant ttcnnanggt ntcaaacttt ggggttttcnc      540
ntnccgggtc ntttcncntt ttaaaccctt nggaattccn gccttttttg ggacnnacnn      600
taagnnttt

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<210> 533
<211> 593
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (1) ... (593)
<223> n = A,T,C or G

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<400> 533
acacatttgc tgatggcttc tcaaaacctg agccgagaat aggggtctgat agcccagcca      60
agtttaaaag cagacacaca cgaatgtagt atcgttgtgc ctgaaatgac cattctgggt      120
tgtttagaat ccagaatcat caaaagccat gtggtatgag gaagtaataa atatcctctt      180
gaatcttctt accctatctt gcacaaatgg atggctgcat gaacagctct tgtaaatgac      240
tctgagtcca caccaataga aacctgcact cattctatag ctacagaggg tttgttggct      300
taaggggact ttatcatctc agcattaatt tcccttttaa agctattctc aagggtggac      360
tgtctcagag ataaacaaag aggaatcctt ttggcttaga agccaactgg cttactcaga      420
cttctcctct tctactcca attcccacac taccatanta tcntcttgac tagaaaatca      480
attatttacc tgacataagg gcaagtctat tctttttcca nnccttgccc tnggggcctt      540
ggnaanaaaa atcctntgcct ttttgaana agttttggga cnngcttagg ttt

```

```

<210> 534
<211> 608
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (1) ... (608)
<223> n = A,T,C or G

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<400> 534
ggtacacttc tgtttatatt taaacaacaa agaaaaaagc atctacacac ttaaaaaatt      60
aattcaatat tcctaaatct attttaactc attttaaaat actacataca gaagccagaa      120
tgcaggggta agaatggaat aagggtgggga gaagaagggg accacgaaga aaaacactta      180
gacaattact tgtctgttgt gggtaaagca acaggaatcc tgggagatac aagaaatcag      240
taacaacttt gctcataact gatattttcc cctcatgttt gtttttaata acgtccatat      300
gggtgctctc tgtatgctcc cttcactggc ctagcaggag gggccttnag cgacggcctg      360

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gtccattcc	agtccgtcct	ggccataagc	ttcataagaa	tcttgaacct	ncccatgtcc	420
atagtcataa	tattctgagt	ccccttgact	ctggctgnaa	ataancctcg	tagccttnga	480
actttggtct	gcgnatgnat	natcatatnc	ctaatacntca	naagnttntn	gngeccgaag	540
ttggngggcaa	gggttctttn	ggaanccctt	tncngcctt	tggggngctgg	acnncctnan	600
agnngggg						608

<210> 535  
 <211> 603  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(603)  
 <223> n = A,T,C or G

<400> 535						
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cttcacctag	tatcttgaca	ttgacagcca	ttcgccacca	tgtccttgga	actatcacca	120
ccgacaaaat	gatggatgtc	actgtgacta	tcaagtcttc	catcgacagt	gaaccgcct	180
tggtcttagg	ccctctgaag	tctgtgcagg	agctgaggag	ggagcagcag	ctggctgaga	240
tcgaggcccc	caggcaggag	agggagaaaa	acggcaatga	ggaagggtgaa	gaaagaatga	300
ccaagcctcc	cgtgcaggag	atggtagatg	agttacaagg	ccccttctcg	tatgatttct	360
cttactgggc	gcnggnctgg	agagaaaatt	actgnntcac	ngtcactctna	agaactgctc	420
ttttatcccc	ctttcaatgg	aaagcncgtt	gntcangtgg	gaagaaagct	tgcncagggg	480
aaanttggat	tcgagatncn	ccgggaaaag	gccaggcctg	gtttttaaaa	agggcccnaa	540
tnccccccg	nanttgnaaa	gggaatccna	aattggtctt	ccntnngaaa	aggggncaag	600
ttn						603

<210> 536  
 <211> 581  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(581)  
 <223> n = A,T,C or G

<400> 536						
ggtactcctg	ggaggctttt	gacagccacg	ggcaggagag	cagcggccag	cttcccagg	60
agctctttct	gctgctccag	tcttttggtca	tggtaccaca	cgaaaaggac	acggaagcca	120
tcaagtcgct	gcagggtggag	atgtggccac	tggtgactgc	tgagcagaac	cacctccttc	180
acctcgttct	acaagaaaacc	atctccccct	caggacaggg	agtctgatcc	atcccattca	240
cccagtgact	tctttttgcc	caggcctgga	ctttttgcat	cagtcacggt	aaccagatga	300
ctttgcctgt	taccaaaccct	catgcattcca	cgtttgctgc	tggggaggaa	taaaaagaca	360
tcgttcccgc	ttctgcgttt	tgntattcct	actgccgcca	taggaattat	ttcgtggctg	420
aacgttacct	agcancccga	gaacactttt	ggatagaatt	ngagttgagg	acattggctg	480
gcttttaaaa	ancccnctt	ggaaatngna	atnctttctg	ntcctttctc	cggnggttcc	540
ncctnanggn	anttttggtt	cgctttgntn	caaagnagg	g		581

<210> 537  
 <211> 568

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(568)  
<223> n = A,T,C or G

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<400> 537
ggtacggact actccctca catgcgtcct acctgtgaaa ctctgggaag caggaaggcc      60
caagacctgg tgctggatac tatgtgtctg tccactgacg actgtcaagg cctcatttgc      120
agaggccacc ggagctaggg cactagcctg acttttaagg cagtgtgtct ttctgagcac      180
tgtagaccaa gcccttgagg ctgctggttt agccttgacac ctggggaaag gatgtattta      240
tttgtatttt catatatcag ccaaaagctg aatggaaaag ttaagaacat tcctagggtg      300
ccttattcta ataagtttct tctgtctgtt ttgtttttca attgaaaagt aattaaataa      360
cagatttaga atctagttag agcctcctct ctgggtgggtg gtggcattta agggctaaac      420
cancnanaaa tgcttggtgc tggtnaaaa agctcangtg gctgctgtgg tggctnatgc      480
ctgnaatcca acattntggg aaggccaagc cggaaaaactg ttgngccnng anttaaaata      540
anctgggcac ntacaanntt cgtttnna                                     568

```

<210> 538  
<211> 598  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(598)  
<223> n = A,T,C or G

```

<400> 538
ggtttttttt ttttttngtt catgtctttt attaaactcat acagttactt gtcttctggt      60
ttgttgaaac agtaagtcag acaacntttg ccacaataat gtctgtcaaa gtgacttgcc      120
ataaanacc cancaccaca ttcatacataa gggcactctt gacgaaggcg actaattttg      180
ccattctatt tcaggacagc cagctaaacc ttctntctct tgtgcttatt cttcttgagg      240
gtgggtgtaag acttcttctt ctttttctta gcaccaccac gaagtcttaa cacatgatga      300
agantagact ccttttgaat attgtagtctn gacaagagtn catacatcat accaactttn      360
tanatacaca gctcagttaa ttagcttgat ggcacagtta tngttnggaa nagagangag      420
tgcancatan gnangagtga ngngnggatt cccacaattt tctnagaacn gaanagttag      480
nngaattagt aggtactgga aatgaaatnn ggcttagcct gnctggntta gaaanaagaa      540
ttcnaagccc tttgtcaana nttntcaaaa agtnacttta ngcctatntt gcgggnag      598

```

<210> 539  
<211> 607  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(607)  
<223> n = A,T,C or G

<400> 539

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ggtagaggct ttaacagaaa ttcaggagtt catcagcttt ataagcaaac aaggcaattt 60
atcatctcaa gtccccctta agagacttct gaacacctgg acaaacagat atccagatgc 120
taaaatggac ccaatgaaca tctgggatga catcatcaca aatcgatgtt tctttctcag 180
caaaatagag gagaagctta cccctcttcc agaagataat agtatgaatg tggatcaaga 240
tggagacccc agtgacagga tggagagtga agagcaggaa gaagatatca gctccctgat 300
caggagttgc aagttttcca tgaaaatgaa gatgatngac agtgcccgga agcagaacaa 360
tttctcactt gctatgaaaa ctactgaagg agcttgcata aagagtcaaa aaaccagaga 420
cgaattggct ggtgagctgg ggtgccaaac tactggcgnc tggagccctt taccggggag 480
cccgggnccc anggnnttgg cttganncag gggcttcaat tggccttgaa aacnagtctt 540
ttttggttgg attagnaacn cacngtgtca agctncttta agccaaaaat tntccnggnt 600
tttnccg 607

```

```

<210> 540
<211> 432
<212> DNA
<213> Homo sapiens

```

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<220>
<221> misc_feature
<222> (1)...(432)
<223> n = A,T,C or G

```

```

<400> 540
ggtagctgac attctatttc cccctctatt gatccccacc tccaaatata tcatcaacaa 60
ccgactaatc accacccaac aatgactaat caaactaacc tcaaaacaaa tgataaccat 120
acacaacact aaaggacgaa cctgatctct catactagta tccttaatca tttttattgc 180
cacaactaac ctctctggac tcttgccctc ctcatctaca ccaaccaccc aactatctat 240
aaacctagcc atggccatcc ccttatgagc gggcgagtg attataggct ttcgctctaa 300
gattaaaaat gccctagccc acttcttacc acaaggcaca cctacacccc ttatcccat 360
actagttatt atcgaaacca tcagcctact cattcaacca atagccctgg ccgncctcgg 420
ncgtgaccac gc 432

```

```

<210> 541
<211> 597
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(597)
<223> n = A,T,C or G

```

```

<400> 541
gggtaccggc gtgtcaaaaa aatgtcagat gacgaggacg atgacgagga ggaatatggc 60
aaggaggaac atgaaaaaga agctatttgc gaagaaatct tccaggatgg ggaaggggaa 120
gaagggcagg aggccatgga qgcccccatg gctcctccag aggaggagga agaagatgat 180
gaggagtcag atattgacga cttcatttgt gatgatgatg gacagcctct gaaaaaacct 240
aagtggcgga aaaagcttcc tggatacaca gacgcggccc tgcaagaagc ccaggaaatc 300
ttcgggtgtg actttgacta tgatgaattt gagaaatata atgagtatga tgaagaactg 360
gaggaagagt atgagtatga ggatgatgan gctgatggtg aaatccgatg cccccccaga 420
agaccacca gaaacngtgt tgagcccntn ggagcnnctt ttgaaatggg ttganncccn 480
gtngggcttt naaagccnnc nccttacnna ttnggggect tngantcccn gcccttneet 540
gccttnaaag ggtccanntt ccgttncttc ccagtcangg ggnttaaaaa tnatnan 597

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<210> 542  
 <211> 577  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(577)  
 <223> n = A,T,C or G

<400> 542  
 gccaaggct cagccagtct ctatttaaga aaatttaaca aatacgagta accctgtccc 60  
 aatcactgaa tctctagtta ctactcttag aaacacctgt ggcttcttgg ccctcctggt 120  
 gcccgctctg aatctctctg cagtctacaa aatcgcccca gtcaactctc cacttggagg 180  
 gaattgtcca gtgtggcccc tagaattgag tcaccccta gataccaact gtctgacccc 240  
 gaggagctct gtaagtccct gctcctctc ttcccttgg ggctggtgct gccactcagc 300  
 aataatcctc ttttctctgt gctttcttag gtccctgtcc tctgtctttg aggttggtta 360  
 ggaagcaaga gtcctgatct ttcattgctgc acaatatgag catgcaaaaa gctttttcca 420  
 gcagaacatg ttc tcgtc tccagttgcc cggaaaagga atttggggga tcaaagaact 480  
 tagcttgnc taccccatgg ttgagttctg gccttgga aaaccaagcc aagtnangga 540  
 ccnagacctt ggccggaac cnttaagggc aattccn 577

<210> 543  
 <211> 607  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(607)  
 <223> n = A,T,C or G

<400> 543  
 tcgagcggcc gtccggcagg tacattattg ggctcattt gccagcaac ggggcatcca 60  
 gattgagtgc agtcagggcc atgtcttcac tcgggggact cancaggctt atacctcaag 120  
 caggcacagt gatgcggcgc cttatctctg attggagtgt taccanatg gtgagtgacc 180  
 taagtcaggt gaccgttcac ctgatggcct caccactga agagaatgct gatcactgtc 240  
 ttgatccctt ggtaacaaag acccacctgc tgagcttgtc ctccctcacc taccaacggn 300  
 ntancaattc gcacagctga cgaggagctc tctgntcgtg atggggatcc tacctttcat 360  
 acanacagc tgcacttagt nnanttacng atttctggac aaactaccaa teganacatt 420  
 gcctttgggt aattgatggg tccctnggcc gngacaanct taggggcgaa tttccatnca 480  
 actgggcggg ccgntactan cngnatccta nctttgggac ctaatcttgt tgtanccatg 540  
 gcnttacntg tacctctggg taatcntatc cngtnaanta tccnnanctt tactngccng 600  
 anntnng 607

<210> 544  
 <211> 570  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature



&lt;222&gt; (1) ... (570)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 544

acttgggctt	ctttcagctg	cttcaacaga	gtggcagcaa	ccaagctgga	gtccaagccc	60
cctgataaaa	ggcagccaat	ccttctgtct	gtcatcaaac	gtttctttac	agcattatta	120
aaaaggatcc	tgagggttgt	cttcacagtt	tctatctcaa	aacctggaaa	gagttttctc	180
acattgtcat	agagggcgtg	caggggttca	tcccgacagt	gatgatattt	aaccatttcc	240
acggatgcaa	ctttgccatt	tggctttaaa	tccaaaactt	catagtgtcc	aggaagaaaa	300
ggctccactt	ttaaaaaggg	agtcgcggag	tgtttcaatg	taacaagacc	tttagcttct	360
gaacatacag	ccaaaaatcc	atcttctgtc	attgctttaa	acaaagggtc	gactccatat	420
gtatctctac	ccaggaacac	tttcttattg	gcagtatcca	gtaaaacaaa	tgcnaacaca	480
ccatccaaca	tacaaattgn	ttgctcaatt	cctcctttgg	cataaagatg	aaggattatc	540
tcaccaatcc	acttttggn	tggcnattcaa				570

&lt;210&gt; 545

&lt;211&gt; 330

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 545

accgtccagg	atctccaggt	catagccatc	agccagacac	cagttgacgc	ttgtctcctt	60
agtcttccc	gattgccttt	tggaatcata	tatgctgact	ctgccaacct	tgggggtggt	120
gacaataaag	ggatgtcgta	gtccatcctc	aaatgcactc	ccatctcttg	tcacacgaca	180
gcaaatagca	cgggtcagat	gcccttggct	gaaaaggtaa	cccaatgtga	cagatttgag	240
ataaatgggc	tgcaggaagt	gggtcaacag	tgccccttgc	aggcccagca	cgttccagcg	300
taggattttg	tcactacagg	acatggtacc				330

&lt;210&gt; 546

&lt;211&gt; 589

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (589)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 546

ggtaccagag	gcactgtgga	tggggccacgg	aatgaattgt	cccgggtctc	caaaaagaac	60
atTTTTcttc	tatttaagaa	gctctgtctc	ttccgttacc	gcagggatct	actgagactc	120
tcctatggtg	aggccaaga	agctgcccgt	gactacgaga	cggccaagaa	ctacttcaaa	180
aaaggcctga	aggatatggg	ctatgggaac	tggattagca	aaccccagga	ggaaaagaac	240
ttttatctct	gcccagtata	gtatgtctca	gtgacagatg	gattagggcg	tgtcatacta	300
gggtgtgaga	gaggtaggtc	gtagcattcc	tcatacatg	gtcaggggat	tttttttttt	360
cctttttttt	ttctttttta	gccataattg	gtgatactga	aaactttggg	gttccccattt	420
atcctgcttt	ctttgggatt	gctaagcaag	gncttggcca	agccccccct	ttttttcccc	480
caaggngaaa	agnccnaaan	cctaanaagn	tatcctttct	ttttanccca	aggettccct	540
tagcccttgg	ncncctggg	ggncccnttc	ctttaaaang	tttnggttt		589

&lt;210&gt; 547

&lt;211&gt; 613

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(613)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 547

```

ggtaccaggt ttaaagttag tcttctggag aagtattttt gacattgagc tctgggacag      60
gacaccttgg gtttgtggac tgcagcccac tatgatgtta ttactttctt ggccaggcct      120
ccagtggaag tgcacaggca ctcccaatgt tgtaaatgct ctgtcttcca tttgttctgg      180
aatcctacgt gttgggtctgt gggtccatgc attagctggt tgtaaataat gcattttgcat      240
actgaaaaag gaatgccacc tgccacagtt gatgggtgagg aagctccttt gacgtggtgc      300
aattttgatg agatgtctct ggggacacga ggatgcccta atgatgctga ctgtcatgg      360
ttgcagcatt tgaacttttg gtgttaaaaa naaaaacctg tnagtctgga accctggcaa      420
cattttacaa cctnngnatt tttaaaagaa ggcntttctt attaaaaaaa ttcnnaaacn      480
ccaccagnnc ctattgggtc aaaccaattc ctncncttnt ggggccnctg gttttttaaa      540
ggggcctttg ctngaancaa ttggnantcc canggggttc ganaaaaaant gaaatggttt      600
tnnnccnccc tcc

```

&lt;210&gt; 548

&lt;211&gt; 578

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(578)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 548

```

ggtacatatg tattttacaa tatacttacc atgagtttag aaaaatttga attcccacca      60
ttctatacca accaaccaca accccactgt ctacattccc cagccagaag acttagaatc      120
catgcttgag ccaaagcctc cattaataacc actgcccagc cctgcattgg atgctgatcc      180
ccaaccaatt gctgcaccag aattagagcc actataagag ttatttccag aaccgaaggc      240
ctgggttggc tccctctgca tgttgcttg gttttgggta ttaccgatg ggcctgactg      300
gttctgctgg ctggctaaca tgcccatcat accccaactg ctctgtantg ctgcctgggc      360
ggcagccatc atggctggat taatgctgaa cgcaccaag ttcattccacc accatattac      420
tacctttgat ggttnccaaa ncaagtcacc cctntgggta ttaccaaacc caccctggat      480
cccaaagccc cctgggatta ccccccaan tttcncttnt ttntaaatng ccaatgnnta      540
tggggcttaa ggtcngcntt ngatttttga accctgnt

```

&lt;210&gt; 549

&lt;211&gt; 620

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(620)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 549

ggtaacgcatg	tcatttccca	tcattggaacc	actcatgggt	gctgggtggaa	cgccaggatt	60
agcttcataa	cctatgccac	caccacctcc	tagaggtgga	aattttctggc	ctcctgaacc	120
atagggatct	cccatgttca	ttgctcctcc	gccacccatt	cgcattgtctc	tttcccgtgg	180
atccatgtag	cccattcggc	tgtaactttc	ctctcttttg	cgcctcattt	gttcttccat	240
ctcacgttga	cgaatcatca	tctcttcctc	tcttctacgt	cgntcctcct	cttgccctcaa	300
ttgcatttct	ttacgtttct	gcatttcttg	attgtgaaag	ttcttccatg	cgtcttaatt	360
cttcctgtcg	tctcatcaga	tcttggcgca	aaagatttgc	ctgatgttca	tgatangga	420
ttttccattt	cacttttcca	atttggnctt	ttggcanctt	ttcannngtg	tnnttcaaac	480
ttnggtncct	tttggctggg	nttttcccat	ntcnatncan	atgagnnttg	nnntggnggg	540
ggagnantgg	tngggnccta	nnctgtccgg	cccntntnaa	angggcgnaa	tttcnnaagc	600
cncatgggng	ggccggtant					620

&lt;210&gt; 550

&lt;211&gt; 577

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(577)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 550

acctatgttt	cactcctcgg	aaatgaagag	gaagaatcaa	aaatcttcac	cactcttgac	60
cctgcttctc	tggcttggct	gactgaggag	gagccagaac	cagcagaggt	cacaagcacc	120
tcccagagcc	ctcactctcc	agattccagt	cagagctccc	tggctcagga	ggaagaggag	180
gaagaccaag	ggagaaccag	gaaacggaaa	cagagtgggc	attccccagc	ccgggctgga	240
aagcagcgca	tgaaggagaa	agaacaggag	aatgaaagga	aagtggcaca	gctagctgaa	300
gagaatgaac	ggctcaagca	ggaaatcgag	cgcctgacca	gggaagtaga	ggcgactcgc	360
cgagctctga	ttgaccgaat	gggtgaatct	gcaccaagca	tgaaccaatt	ggggagcatc	420
aagtccccca	cttgggccac	acttaccac	cttttccaga	agtggcttct	gnctaccttt	480
nacttanngc	catggtgggn	accttaattc	ccattccccca	gggggaagnt	ttgaattacc	540
aaaggggaagg	gtttnacctn	gttttagaaa	ttngccc			577

&lt;210&gt; 551

&lt;211&gt; 573

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(573)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 551

ggtacaaaacc	atcttctact	gtgacttctt	ctacttgtat	gtgaccaaag	tccttaaggg	60
aaagaagtta	agtcttccaa	tgccaatctg	aggaccttca	gagacagtct	acgccttaac	120
aagcacatga	aggaaactat	tttgaatgtt	ctctttggca	acttatccat	aatttgggat	180
caaatgttaa	aaccagaaaa	gtgttttagtg	tggatttcag	caaaacctga	tcatcccacc	240
cagaagacct	tctcatcaat	agatcgccct	taaagaccca	ttgtaaggtc	ataaaaaacc	300
tcggccaact	gcacaaagat	rgtgccctc	tgcaacaaga	aaccttaagg	tgtcttaccg	360
acgaaataaa	aaacataaat	gattgntctc	caaaggcctg	agggcaagac	tcatgatgag	420
caagtcaacc	cccaatctgg	aacaatggcc	ttctnttaaa	atgncccact	taagaccgt	480

taaaaatatta ggganctggc cggcgggccc tttaaanggc naattcngnc nctggngggcc 540  
ntacttangg gaccaacttn ggnccangtt ngg 573

<210> 552  
<211> 581  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(581)  
<223> n = A,T,C or G

<400> 552  
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caaaaaacaa acaaaaaaaa ccctcagtta gttgttttct taagtataat taatccaaac 120  
taataatagc catttaatta gcaatctgta aatcagagag gtatagaaat tcagcagcta 180  
aactgtatct tccacctata gcaactgctgc tactcaaaat attttcttca cgtattagaa 240  
gaattcatag gcattgatgg tcaaaaataag aatt' aaca tagcagcaaa tgacagaaga 300  
gtgagagaaa gagctcctaa tgtggtgaca gtcttaatga tcctttaaaa ggtagaagat 360  
tgngtgcgta tgtgtggaaa ggagtaggaa agaaaagcat gaggttaaga cagggtattta 420  
aagggaatgg cgagatagct accttagaat atttattttt ttaaaaaact gctctgaaat 480  
ctgcccagtg tacctgcccg gcngncnttc naagggcnaa ttttgncnaa tntnnttcan 540  
cttgggcgggc cgtnnacctg gntttttaan ggccccantt c 581

<210> 553  
<211> 575  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(575)  
<223> n = A,T,C or G

<400> 553  
ggtactgccc ttggaacctt tgctgagggc tttgtaattc ctagttaaaa tccatttgta 60  
atattgtttc tgtaaagcac tcatttccat tcttaaaatc tgctcaacct tggcaggaag 120  
agatttttcc acatctttct taactcggcg taacagaaat ggctcaagct ccttgtgaag 180  
gcttgcataa ccatattctc tccctttgcc atgttcttct tcaaaatctt cccaggaaga 240  
aaacttttct ggcataatga aatgtagcaa agaccagagc tctttgaggg aattctgtag 300  
aggagttcca gtgataagga gacgatgatt ggatttataa tctattaaag ttttatacag 360  
aaggagagtc tcattcttta atcggtgtgc ttcatacaaa cctataaatg cccaatttaa 420  
gaccttccag ggaatgcctt aaaataatag aaaaacagta ttttgagaga aaaaccggaa 480  
ttcaaattta gcccttccat ttaatctgac tcaattatta aaatgaaatn naaattaaaa 540  
accaactttg gcctaatttt caaataaaaa atcgn 575

<210> 554  
<211> 548  
<212> DNA  
<213> Homo sapiens

<220>

<221> misc\_feature  
 <222> (1)...(548)  
 <223> n = A,T,C or G

<400> 554  
 acggaggact ccattaataa catggaaatc tccactctga aagcgattca ccatttctgt 60  
 cagcaagtca ggccatttct gtggaaaatc ttctctgcca ataatgctaa ttgcatcact 120  
 taactgcttc tgaatttgct ctgggctgct aagcatcaag tgcactatgt tggctttaat 180  
 ggccactcga tcggcttcac aaattttgtt tggttcatct tcaacaattc tccagttcct 240  
 tttaatatag tttttgaatg ttactgaagc acatactttg ataacattat cctgggactt 300  
 ctccagtaat gtcaaaagca acagtggata attctgattt ccttcaacag attcaagaaa 360  
 tttctcagct ggacgtcgga tggcaggatc aggatcaagt gttttcttta aatattctgt 420  
 tagtgtttgc agattttgcat cgctgagttc catttgctata ggatctcgtg gggatacaga 480  
 aaccgaggaa ggaaccccgag ccgcgagaccg taactngcac taccctcgcta cctnngggcgc 540  
 gaaacacg 548

<210> 555  
 <211> 576  
 <212> ~VA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(576)  
 <223> n = A,T,C or G

<400> 555  
 actccctgca taacaagaga ttatttttga gacagttgat aaaaaccata catccttttt 60  
 attgttaagt cataaagagg tatcaaaatt aaaagcaaaa attacagggg aagacttaac 120  
 aaaactacta ggagcgtcaa aggaagtga aatgggacta ggcgcggggc aatatgaatt 180  
 aatgaacatg ggaaggacaa ggatggggag aacagtgagc atgtgctgaa gatactaggg 240  
 gagaggatct ggtgaaaaat ttgatcttag acaagcgcct aggtaaagaa ataatgggat 300  
 aagattttcta aacccacta tgtgcttaag agtcatcctc gccattggcg ctgnctctgn 360  
 catcctctcc ttctcacctc tttttcatca tccttgatca actccagctt ggcattcccc 420  
 cgatcttcat tatcattaat cttccagtan gnccctctc ttagcanaag taatntgnac 480  
 ccccttana attcattttt ccatttgnct aaattttttt tccnggacnn gtnggnntgg 540  
 gcccttttng nnntaaaant ttttaantctt acnngg 576

<210> 556  
 <211> 613  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(613)  
 <223> n = A,T,C or G

<400> 556  
 ggtacctctt cccatgactg caccagctc caggggccct tgggacagcc agagctgggt 60  
 ggggacagtg ataggcccaa ggtccctcc acatcccagc agcccaagct taatagccct 120  
 cccctcaac ctccatttg tgaagcacct actatgtgct ggggtgctcc cacacttgct 180  
 ggggctcacg gggcctccaa cccatttaac caccatggga aactgttggt ggcgctgctt 240

ccaggataag	gagactgagg	cttagagaga	ggaggcagcc	ccctccacac	cagtggcctc	300
gtgggttatta	gcaaggctgg	gtaatgtgaa	ggcccaagag	cagagtctgg	gcctctgact	360
ctgagtccac	tgctccattt	ataaccccag	cctgacctga	nacttgctcg	aaaagctgtc	420
ttggggcctt	ttatnaaata	aaaagacttn	agnatnatgac	aangganggt	ttaagaangg	480
gacttgnggg	gaantnggaa	gnnannaanc	ccttggttgg	ggtttaagnn	nccccacgtt	540
tgggcccaggc	angtggtctt	ttccttnttg	ggnccttngg	tnncttngng	ggacanaagg	600
nnntttgnac	ccc					613

<210> 557  
 <211> 607  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(607)  
 <223> n = A,T,C or G

acctggatga	aaagcagagg	gaccccagaa	tcgaagcgag	caaagtgtctg	ctgtgccatg	60
gggagctgcg	gagcaagagt	ggacataaac	tttacatttt	cctgtttcaa	gacatcttgg	120
ttctgactcg	gcccgtcaca	cggaacgaac	ggcactctta	ccaggtttac	cggcagccaa	180
tcccagtcga	agagctagtc	ctagaagacc	tgacaggtgg	agatgtgaga	atgggaggct	240
cctttcgagg	agctttcagt	aactcagaga	aagctaaaaa	tatctttaga	attcgcttcc	300
atgacccctc	tccagcccag	tctcacactc	tgcaagccaa	tgacgtgttc	cacaagcagc	360
agtgggttcaa	ctgtattcga	gcggccattg	cccccttcca	gtcggcaggc	aagtccacct	420
gaactgcagg	gcctggccgg	agctgtacga	aaaatgtgaa	ggggaaccac	cctttgcgag	480
gaactnacag	cccaaaggaa	ggcattcaca	gtttcagttg	tacttcaggt	agaaagtga	540
tgaaaaccct	taccagantg	tggcttttgg	cattgcaaat	ggcagaggcc	agcaagaact	600
taaannt						607

<210> 558  
 <211> 355  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(355)  
 <223> n = A,T,C or G

acaaagacaa	agaaacaaac	tacattggca	tttaagccaa	tcaaaaaagg	aaagaagaga	60
aatccctggt	ctgattcaga	atcagatagg	agcagtgcag	aaagtaattt	tgatgtccct	120
ccacgagaaa	cagagccacg	gagagcagca	acaaaaacaa	aattcacaat	ggatttggat	180
tcagatgaag	atttctcaga	ttttgatgaa	aaaactgatg	atgaagattt	tgtcccatca	240
gatgctagtc	cacctaagac	caaaaacttcc	ccaaaactta	gtaacaaaga	actgaaacca	300
cagaaaagtg	tcgtgtcaga	ccttgaagct	gatgatgtta	agggcagtgt	acctn	355

<210> 559  
 <211> 597  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(597)  
 <223> n = A,T,C or G

<400> 559  
 acccgcaaaa cgggacatag tatgtgacaa tctgcatcga tcatggacta ctaaatagcct 60  
 ttacatagaa gggctctgat ttgcacaatt tggtgaaaaa tcacaaaccc atagaaaagt 120  
 aagtaggcta agttggggag gctcaaacca ttaagggtta aaaatacatc ttaaacattg 180  
 gaaagctctt ctagctgaat ctgaaatatt accccttgct tagaaaaagg ggggcagtca 240  
 gaacagctgt tccccactcc gtggttctca aaatcataaa ccatggctac tcttggaac 300  
 caccggcca tgtggtcgcc aagtagagca agccccctt ctcttcccaa tcacgtggct 360  
 gagtgtggat gacttttatt ttaggagaag ggcgattaac actttttgac agtatattgn 420  
 tttgccctga tttgggggat tgnntttgtt ttggtgggtt gttttggaaa aacnggttat 480  
 aaactgggtt tttgnangnt ttgggatttt aaagccnaa ataaaaaann nnanaaaaaa 540  
 aaagnctttg gncctttgggc cggaaaccct taangggcna attccagcca ccttggg 597

<210> 560  
 <211> 559  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(559)  
 <223> n = A,T,C or G

<400> 560  
 gactttgagg caagtgtggg ccaactgtgtt ggcagtggag gtgggggtgtt tgggaggctg 60  
 cgtgccagtc aagaagaaaa aggtttgcat tctcacattg ccaggatgat aagttccttt 120  
 ccttttcttt aaagaagttg aagtttagga atcctttggt gccaaactggt gtttgaaagt 180  
 agggacctca gaggtttacc tagagaacag gtggttttta aggggttatct tagatgtttc 240  
 acaccggaag gtttttaaac actaaaatat ataatttata gttaaggcta aaaagtatat 300  
 ttattgcaga ggatgttcat aaggccagta tgatttataa atgcaatctc ctttgattta 360  
 aacacacaga tcacacacac acacacacac acacaaaccn tntgcctttg atgttacaga 420  
 ttttantccg ttnattttta aggatagagc ctttatnggt gnnnanaaaa caatctggan 480  
 taaaaaaac ncncnnggcc ttgnatttng ncttnntngg ggtttcccca aanccattnn 540  
 nnttgncagg ctnggggng 559

<210> 561  
 <211> 569  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(569)  
 <223> n = A,T,C or G

<400> 561  
 ggtacaagct tttttttttt tttttttttt tttttttact ttttgggana naggctagga 60  
 ggaggaaagg gtgaaaacag cgtctcactg gagtctcaaa agtgatatgaa tcttctggta 120

<400> 563						
acgccaagaa	ccgtattctt	tgccacaggg	ttttatgtgg	gacacttttag	acttgagtga	60
tgccgaagtg	ctcaaggagt	tatacacgtt	gttaaattgag	aattacgtag	aagatgatga	120
caatatgttc	cgattttgact	attcacccga	gttcctgttg	tgggctctgc	gtccaccagg	180
ctggctcctg	cagtggcact	gtggggtcag	agtgtcttca	aataaaaaac	tggtcggggt	240
ttaagtgtcc	atcccagcaa	acattcggat	ttatgacagt	gtgaagaaga	tggtagaaat	300
caactttctt	tgtgttcata	agaagttgag	atcgaaacgg	gtagccccag	tgctaattcg	360
agagatcact	agaagagtga	acctggaagg	gatcttccag	gctgtgtcaa	aaagcacact	420
ctccannoct	cngggccctg	cattcctgnc	cttntntnna	gacactttcc	ctttctattt	480
tactgnngtg	acttttctca	acgctgtnac	cccaaccctt	anantttttn	gcccttggcg	540
gnntatnngt	taaanatcac	ccttcccnng	gtttt			574



<210> 564  
 <211> 600  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(600)  
 <223> n = A,T,C or G

<400> 564  
 ggtacagaat atttctaata aacctaataatt taatcacagt taaaattttct caaaagtatt 60  
 ttcaagtgtc caagaatatt aaagtttggg gggaaatacc taagtcataa ataagcaagt 120  
 attccctcca agattcacta attgggataa aggtctcagg gtaagccac aagaatggtc 180  
 tgcaataaag aaaaatcagg tctgtgtaga gtaattttctg ccatcttttag cagaaaagcc 240  
 aaaaacattc tgagccaaatc aaaagcaaag atcttttgat tcagcgcctt ttgttgtgtt 300  
 agttttaatt tctaactttc caacatgtta tagctcagaa attcccatat gcttactatc 360  
 tgtaataagg aactataacg ttaaagaaaa aattcagaga ccgtgatcat tttccatcat 420  
 aggtctggct ctctttggta gaaacagatc aagactttct ttattttttct cttcccncc 480  
 ngaagaaaan ggggggttta atggcnttta cccttgnaa anaaccncc ngggtttaac 540  
 ctnaaattn gngggggtta aanancctaa ngntnagccc ttttnanaa ctnggggnaa 600

<210> 565  
 <211> 600  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(600)  
 <223> n = A,T,C or G

<400> 565  
 accatcggcc atgtggacca cgggaagacc acactgactg cagccatcac gaagattcta 60  
 gctgagggag gtggggctaa gttcaagaag taccaggctg tttgtgatcg tatcagccgc 120  
 tatgtgaaac agcctttacc tgatgagttt ggcagctcac ccttgagacc aggggcctgc 180  
 aatggctcca ggaacagctg tgaaggagaa gatgaggaag aaatggagca tcaggaagaa 240  
 ggcaaagagc agnttttnana aacagaaggc agnggggaag atgagccagg aaatgacccc 300  
 agtgagacca cccaaaagaa gatcaaaggc cagccctgcc caaaaaggct tntttacnt 360  
 cagtcttgtg aactcctatg gaacagctga cataaatttc actttgcagc tnatggaaaa 420  
 ctacntaaac tcaantnttc ganctacact tggncntgga tttgtgacnt ttgaaaactn 480  
 tggaganttt tncatgnnt gtgcncnaa attntaggg nttntccnat aaatctctgt 540  
 tanccttttt gggnacntt tcaagnaag atntnangnc cctanggncc nttnaaaaan 600

<210> 566  
 <211> 576  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(576)  
 <223> n = A,T,C or G

<400> 566  
 ggtactgaac aggttaagtca tccctcagcc agagattagt ctacttcttc catgcgtgat 60  
 gtgtcgtcat ctcccttcaag ggtgtttttc tttatttttg ttaataattaa aaagtctgta 120  
 tggcatgaca actacttttaa ggggaagata agatttctgt ctactaagtg atgctgtgat 180  
 accttaggca ctaaagcaga gctagtaatg ctttttgagt ttcattgttg tttattttca 240  
 cagattgggg taacgtgcac tgtaagacgt atgtaacatg atgttaactt tgtgggtctaa 300  
 agtgttttagc tgtcaagccg gatgcctaag tagaccaaata cttgttattg aagtgttctg 360  
 agctgtatct tgatgtttag aaaagtattc gttacatctt gtagggatct actttttgaa 420  
 ctttttcatt ccctgnaggt gacaantctg catggacctg ccccgggcgg cccttnaaan 480  
 ggcgaanttc annncantgg ngggcnntct tngggnnccn ncctggncca aatntggggg 540  
 ancnnggnca anctnttccn tggggaaatg gntccc 576

<210> 567  
 <211> 427  
 <212> DNA  
 <213> Homo sapiens

<400> 567  
 ttttggcagt aaatcaattt tatttgtgtt cacagaacat actaggcgat ctgcacagtc 60  
 gctccgtgac agcccaccaa cccccaaccc tctacctgc agccacccta aaggcgactt 120  
 caagaagatg gaaggatctc acggatctca ttcctaattg tccgccgaag tctcacacag 180  
 tagacagacg gagttgagat gctggaggat gcagtcacct cctaaactta cgaccacca 240  
 ccagacttca tcccagccgg gacgtcctcc cccaccggag tccctcccat tcttctcct 300  
 actttgccgc agttccagggt gtcctgcttc caccagtccc acaaagctca ataaatacca 360  
 agagacctgc atttacagra gggggaacat ctcacacctt tgcataagtt aaaataaata 420  
 ttaccgt 427

<210> 568  
 <211> 616  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(616)  
 <223> n = A,T,C or G

<400> 568  
 acaagagtga tggcaatgtg actggaacag aaatagtttc taccaggcac acaaaagctc 60  
 ctgtaagccc cgtagtccg tccctgcaaag ggcctcagtg ggaaccagggt ctgcagacct 120  
 gagtgggcag agagacgggt ggaagcagggt gcccagatg gtcccgagg cgtcacctgc 180  
 tggtttgag accttaaggc agttgtgctt caaacttctc tcccagggtc tcagggtggag 240  
 actaggagtg ttgacctaaa ggtcctccaa ggagaggcca aggtcttggg gacagatctg 300  
 gtttaccatc ttttaacaaa aggcaaatgt cttctcttct tcagaaagag tcattaacac 360  
 caaaattctt ttcttnngaa gtttcttctt ttccgatgcc atcttccaag tttgnnccca 420  
 agaatgaaaag gcgtcttttn ccnaagggtc aagggtttcc attcacnttg ggccccattg 480  
 naaaagggac tggttccttt tgggggggttg ggncccggac cccccaaana aggnaanggn 540  
 ttttgnccc aagcctttnt tcccnggggn ggggaaggna anaacctttg ggcccngna 600  
 acccacctta angggg 616

<210> 569  
 <211> 582

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(582)  
<223> n = A,T,C or G

<400> 569  
acagaatata acgcagcttg gcaggatgca tacggccctg cgcaggggaa agtatttcaa 60  
atcagctggc aggttcaagc ctttctgcac tgtagacttt ccacactctg gaaaagaagc 120  
aaacaaacaa accccaaaga acccccga aaacaaaaa ccaccggga ggtgcatgag 180  
tccaatggga atgcaaccgt gatgccgctg tcctatgccc agtgacagca caggtcacgt 240  
aagttacagc aggggagggg tagctcaagc tacagaggat tattgtcata ttgctaagac 300  
agcataaatc cattcaaaaa aaaaaaaaaa aatccaaacc agggtaagta aagaaaggaa 360  
aaccaaatct atacagcatt tacaacaaat aaatctctag ccagctgggg gtaaaatatg 420  
catctatgta tagactatgt gtagggtaag aaaagctttt aatatnggtt anaaagaggn 480  
cctttgatta aaggccttgg ccggaacncc cttaaggnnn aattcnagnc nattgggggc 540  
cggtcnaagg ggatccaacn tgggnccaaa ntggngaatt nn 582

<210> 570  
<211> 557  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(557)  
<223> n = A,T,C or G

<400> 570  
ccgggcaggt acttcttgcc ttttaagatag gcaccaggaa atctttcaag gatctcatag 60  
tcactctcca atttatagag ggctgacaat ctggcttcca ttaaaatgag taatcgctct 120  
ctggcaacat ctttaatttt cacatattgc atttctggat taacacacac agcaagggtta 180  
ctaggtagag tccagggagt ggttgtccaa gcaactaaag atacagtttc atcttcttc 240  
aaagggaaa ttacaaatac tgaaggatct tgaacatcct tataattctg gtgtgactcg 300  
aagttggaaa gtggagtgtt acatgccgta gagaagggca tgactttcac acctctataa 360  
acaaggcctt tatcatagag ttggttgaag acccaccaga ctgattccat gaattgtgga 420  
tacagagttt tatagtcatt ggcaaagtna atncatcggc aagttgtac aggagacttc 480  
actnannnaa atctcatcnc aatnnntgga ctnatggata cctnggannc cnttttngcc 540  
caatctgggc ctngatn 557

<210> 571  
<211> 382  
<212> DNA  
<213> Homo sapiens

<400> 571  
acactgctct cttcctggca attgacagt gtaaccctcc cgctacgggc actgggactt 60  
tgctgataac cctggaggac gtgaatgaca atgcccgtt catttaccac acagtagctg 120  
aagtctgtga tgatgccaaa aacctcagt tagtcatttt gggagcatca gataaggatc 180  
ttcaccgaa tacagatcct ttcaaatttg aaatccacaa acaagctgtt cctgataaag 240  
tctggaagat ctccaagatc aacaatacac acgccttggg aagccttctt caaaatctga 300

acaaagcaaa ctacaacctg cccatcatgg tgacagattc agggaaacca cccatgacga 360  
 atatcacaga tctcaggga cc 382

<210> 572  
 <211> 621  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (621)  
 <223> n = A,T,C or G

<400> 572  
 acaagctttt tttttttttt tttttttttt tttttttgcc atttattgcc atgttttaaa 60  
 attcgtgcaa aatatntgaa gccctggaca gagaatacaa agtgatattt tcccaagaaa 120  
 cntaaaacta ggaaaagggg tgggggacat tttcccacca nagctncccc cagccaggc 180  
 cccaagcagg gtgaggcctn caaccgggcc agctgagcag ggaggactaa gagctacaat 240  
 ctggaccang gaaggagggg tggaatttgc aacagngtnt taactaccaa cgagaggaaa 300  
 gccagtcaac tgtacaacct cttgcggagc ggggaagggtg actaccngaa caagacatgc 360  
 tgcttgccct gtgcttgttg gctgcaaagt gggnttccaa taagtgggtc catgaacgag 420  
 gacaggagtt tttgancctt gnggatcaac aaaangttna ctgacatccn tttctgcctt 480  
 tccctttcct ggnnctttta anccatgtca acnntgacan acnctntng atggtccctt 540  
 tggnagtctt aatnaggctg atttttggan nantnaatnt ttttttggaa cncaaggnga 600  
 acnttttttg ngaattttng g 621

<210> 573  
 <211> 296  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (296)  
 <223> n = A,T,C or G

<400> 573  
 ggtactcatt gtgctctttg gtgcctttcc tttctacag aaaaggaagt gatctatacc 60  
 aaggtttgca gggaagtcaa atgttctcaa cctttcatgc cctctgggta ctcatctggc 120  
 ttgcaaaata atttggatcc ggacagattt ccagtatttt caagtccgct gctttcccgc 180  
 aaagctcggc ctaacctgga cctagttagg tccgcaggcg ccaccgncgg cgcactccgg 240  
 agaagaagct ccttcttcag ccgcccagga gagttcctcg agaaagatgc cgccgc 296

<210> 574  
 <211> 616  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (616)  
 <223> n = A,T,C or G

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<400> 574
ggtactccaa cgccaccctg tgcagaaatg agagaagaca gtgctagagt ctatgaaaac      60
gtgggcctga tgcaacagca gaaaagtgtt agatgagaaa acctgccaaa acttcagcac      120
agaaatagat gtggactttc accctctccc taaaaagatc aagaacagac gcaagaaagt      180
ttatgtgaag acagaatttg gatttggaag gcttgcaatg tggttgacta ccttttgata      240
agcaaaattt gaaaccattt aaagaccact gtattttaac tcaacaatac ctgcttccca      300
attactcatt tcctcagata agaagaaatc atctctacaa tgtagacaac attatatttt      360
ataggaattt gtttgaaatt gaggaagcag ttaaattgtg cgctgtattt tgcagattat      420
ggggattcaa attctagtaa taggcctttt tattttattt ttataccctt aaccagggtta      480
atTTTTTTTT ttcctcattg gtnggggatg atgagaagaa atgattnggg aaaattaagt      540
accaacgnac tagaaaagtg agaaccattc tatttcccnt ntggttccng gagnggataa      600
ttcatttgan ggcttn

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<210> 575
<211> 614
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1) ... (614)
<223> n = A,T,C or G

```

```

<400> 575
ggtacaaaca ttttacaaaa aagaacatta ccaatatcag tggcagtaag ggcaagctga      60
agaataaata gactgagttt ccgggcaatg tctgtcctca aagacatcca aactgcgttc      120
aggcagctga aacaggcttc tttcccagtg acaagcatat gtggtcagta atacaaacga      180
tggtaaatga ggctactaca taggccagtg taacaaactc ctcttctcct cgggtaggcc      240
atgatacaag tggaactcat caaataattt aaacccaagg cgataacaac gctatttccc      300
atctaaactc atttaagcct tcacaatgtc gcaatggatt caagttactt gcaaacgac      360
ccgggttgct atacagatac ttgnttttta cacataacgc tatgccatcc cttncttcac      420
tgcccagtcg ggtttcctgn tgttggaccg aaaggggatc cttttaaaaa tgcttcnttc      480
aagacagaag tgagaaagaa aggagaccct gagggccagan ctattaaaaa ttgtgngtcc      540
ccaaaaggaa ggggaaagggn agaattgaaa ggaaacggnt ctttngccca ggatnggaan      600
cgggactacn ttgg

```

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<210> 576
<211> 596
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1) ... (596)
<223> n = A,T,C or G

```

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<400> 576
acatcaagac ttttgaaca gcgatcgtaa tcaatcctga gaaagacaaa gacatggtcc      60
aagacctgtt ggacttcaag gacaagggtg accacqtgat cgaggctctg ttccagaaga      120
atgagcgggt cgtcaacctg atgaaggagt cctttgagac gttcatcaac aagagaccca      180
acaagcctgc agaactgatc gcaaagcatg tggattcaaa gttaagagca ggcaacaaaag      240
aagccacaga cgaggagctg gagcggacgt tggacaagat catgatcctg ttcagggtta      300
cccacggtaa agatgtcttt gaagcatttt ataaaaaaga tttggcaaaa agactccttg      360

```

ttgggaaaag	tgcctcagtc	gatgctgaaa	agtctatggt	gtcaaagctc	aagcatgagt	420
gcgggtgcagc	cttcaccagc	aagctggaag	gntgttcaag	gacatggagc	tttcaangac	480
atcatgggtca	tttcaagcca	gcntatgcag	nacngagtg	cttcaggcct	atagacctac	540
agggacatct	nccatggctt	ctngccacat	aacnccatgg	aangccttac	cccaaa	596

<210> 577  
 <211> 617  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(617)  
 <223> n = A,T,C or G

<400> 577						
ggtaccacaa	ctcccaggat	tttcctggat	caaacccttgt	atctcttctg	caagtattgt	60
gtatattggt	ctgagagacg	tggaccctcc	tgaacatttt	attttaaaga	actatgatat	120
ccagtatttt	tccatgagag	atattgatcg	acttggtatc	cagaagggtca	tggaacgaac	180
atttgatctg	ctgattggca	agagacaaag	accaatccat	ttgagttttg	atattgatgc	240
atttgaccct	acactggctc	cagccacagg	aactcctgtt	gtcgggggac	taacctatcg	300
agaaggcatg	tatatgtctg	aggaaataca	caatacaggg	gttgctatca	gcactggatc	360
ttgttgaagt	caatcctcag	ttggccacct	cagaggaaga	ggcgaagact	acagctaacc	420
tggcagtaga	tgtgattgct	tcaagctttt	ggtcagacca	gaagaangaa	ggcatattgg	480
ctatgaccaa	ctttctactc	ccagttcacc	agatgaatca	gaaaatcaag	cncctgtgan	540
aaattaggag	acacttngcc	ctggcatggt	tacaaaaagg	ctttnnngaa	tntgangcct	600
ttaggggaaa	aaataaa					617

<210> 578  
 <211> 409  
 <212> DNA  
 <213> Homo sapiens

<400> 578						
ggtacatgca	gaattgtcaa	ctacagggaa	tgaaaagttc	aaaaagtaga	tcctacaaga	60
tgtaacgaat	actttttctaa	acatcaagat	acagctcaga	acacttcaat	aacaagattt	120
ggtctactta	ggcatccggc	ttgacagcta	aacacttttag	accacaaagt	taacatcatg	180
ttacatacgt	cttacagtgc	acgttacccc	aatctgtgaa	aataaaacca	catgaaactc	240
aaaaagcatt	actagctctg	ctttagtgcc	taaggtatca	cagcatcact	tagtagacag	300
aaatcttatc	ttccccttaa	agtagttgtc	atgccataca	gactttttta	tattaacaaa	360
aataaagaaa	aacatccttg	aaaatatatt	atcagaggaa	ttgtagagt		409

<210> 579  
 <211> 619  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(619)  
 <223> n = A,T,C or G

<400> 579

ggtaactat	tttatccaga	aagtcttctc	tatgtagaga	agtcagagag	actagatgct	60
ttcactagg	aatgtcttcc	cacccagcca	tcacaaatgt	ggacaatcac	tgcattccaca	120
tctgtaggca	tatttctatg	gaagttttaat	tgacagctat	attcattatt	tatttttacia	180
tttcatTTTT	ctacaccttt	gagatttatg	aatgcagttt	tttcttaaaa	tttatttttaa	240
cttgacagta	tgttttttagt	tcccccaatt	taattaatgg	accatgtgca	tatatatggg	300
agtgtgctta	ctgtttaata	atttacttgc	atacttatga	gaatttcaca	ttggaattca	360
taatggtaaa	acaacataca	tctgccaaata	tacgtttttt	ctgntgggtt	aagagaagat	420
aactgacagc	tttacctact	tctacagat	gcattctaaac	ccagatttac	tgagaagaag	480
tgtattggac	tctgagtggg	aaaagagtat	gggtgttttt	ggttttaagn	tctgctctag	540
anccataatt	ngnaaaaaat	tttaggnctt	aanctggtn	cctaaaattg	gnnanccaaa	600
ngttnaatga	aanggctgc					619

&lt;210&gt; 580

&lt;211&gt; 632

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(632)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 580

ggtaaaaaa	ttttacaaaa	aagaacatta	ccaatatcag	tggtagtaag	ggcaagctga	60
agaataaata	gactgagttt	ccgggcaatg	tctgtcctca	aagacatcca	aactgcgttc	120
aggcagctga	aacaggcttc	tttcccagtg	acaagcatat	gtggtcagta	atacaaacga	180
tggtaaatga	ggctactaca	tagggccagt	taacaaactc	ctcttctcct	cgggtaggcc	240
atgatacaag	tggaaactcat	ataacaacgc	tatttcccat	ctaaactcat	ttaagccttc	300
acaatgtcgc	aatggattca	gttacttgca	aacgatcccg	ggttgtcata	cagatacttg	360
ntttttacac	ataacgctgt	gccatccctt	ccttcactgn	cccagtcagg	tttctgttg	420
gtggaccgaa	aggggatcat	tttaagaaat	gcttccttna	agacagaaag	tgagaaagaa	480
aaggagaccc	ttgaggnacg	gaactaatta	aacctgggtg	ggtgccccaa	aagggaaggg	540
ggaaaggccg	gaanttgnaa	nggataaccg	nttctnttng	cccagggant	cnggaaccgt	600
ggctcgcttt	gggcttggac	anncccaaat	cc			632

&lt;210&gt; 581

&lt;211&gt; 607

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(607)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 581

acataagtga	tggagtatca	atgctgggtg	ttgaggtgga	gaagggaattt	agttccttga	60
attttctttg	ttctcctctg	tgttccttct	tggccaggta	acccctgcta	tatcataaga	120
tttcatctgc	gagaaaaagga	ggaattcttc	tacagctccc	ctgctcaact	ttcaggagat	180
tttgacccat	gtgctgtta	tcaccgaaat	tttttaagga	ggcttctcct	ggcatgaaag	240
agttgggtatt	gtgtcccga	ttgggtgggt	cttgytctca	ctgacttcaa	aaatgaagcc	300
gcggaccctc	gcggtgagtg	ttaacagctc	ttaaggtggc	acgtctggag	tttgttctct	360
ctgatgttcc	ggatgtgttc	agagtttctt	ccttctggta	ggttcctggc	ctcgcttggc	420

## WO 99/64576

## PCT/IB99/01062

ttcaggaatg	aagctgcaga	ccttctcggg	nagtgtntaca	agctcttaan	gcaggccgctc	480
tggaagtgt	tcgttcctcc	tggggctcgt	ggctcttgctg	gctttaggag	tcaagtncaa	540
accttnaggg	tgagtgtaca	ntcatanaag	cagtgtngnc	ccaanaatna	ncnttnaaaa	600
gccaaacn						607

<210> 582  
 <211> 603  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(603)  
 <223> n = A,T,C or G

<400> 582						
actgtattct	ccatatgtag	ctcggatgcg	gagggctgtg	agattccgca	gtaaccttcg	60
atactcaaag	taactcagct	gggggctcca	attattgctt	ggatgctcat	ttaacctgaa	120
tgtgtaagtc	tcggtgagcc	cacaaggcag	tgtcttgcca	agtggcatca	agggagctgt	180
gatccgtaga	ccagcacctt	ccagaatcac	atcatgggca	gatgggtgtc	tgcttcctct	240
gtccacacgg	tagtcaaagg	acaggctttg	accatagctc	acctgttgat	tcccaagaaa	300
tttggcagga	gccacaaaat	agacagggtc	tagtcgttgg	gctgagctaa	acacatcttg	360
atgggcgtcg	tgaccattgg	agctttgcag	gagaccatt	tcgttggaca	gccttcacgc	420
catcaacatc	ttgatgaaag	gtanaagtga	tcttatggac	actgnattct	gcanaactgc	480
ggcaacttgg	ctgaatgcc	tagcagaacc	ctgggtacct	tnggccggaa	cacgcttang	540
gcgaattcag	cccacttggg	gocgtctann	ggnanccact	ttggggccan	cttgggggaan	600
ant						603

<210> 583  
 <211> 535  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(535)  
 <223> n = A,T,C or G

<400> 583						
ggtacacaca	ggaccgcctg	gggctaaagg	aaatggacaa	tgcaggacag	ctagtgtttc	60
tggctacaga	aggggacccat	cttcagttgt	ctgaagaatg	gttttatgcc	cacatcatac	120
cattccttgg	atgaaacccg	tatagttcac	aatagagctc	agggagcccc	taactcttcc	180
aaaccacatg	ggagacagtt	tccttcatgc	ccaagcctga	gctcagatcc	agcttgcaac	240
taatccttct	atcatctaac	atgccctact	tggaaagatc	taagatctga	atcttatcct	300
ttgccatctt	ctgttaccat	atggtgttga	atgcaagttt	aattaccatg	gagattgttt	360
tacaaaacttt	tgatgtggtc	aagttcagtt	ttagaaaagg	gagtcgtgtc	cagatcaagg	420
gccagaactg	tgcccaggcc	caaaggagac	actaactaaa	gtagtggat	agattctaan	480
ggcaaacatt	ttccaggcct	gccatatttc	aagcaanaag	ggccnaagcc	tgagg	535

<210> 584  
 <211> 524  
 <212> DNA  
 <213> Homo sapiens



<220>  
 <221> misc\_feature  
 <222> (1)...(524)  
 <223> n = A,T,C or G

<400> 584  
 acaactctct taaaagagta tggataacta tattttctgg attctggagg ttgataacca 60  
 tatgcactta acattatatt ctataaacat taagtagtgc cagttatgag attcccagtt 120  
 cttactaaat tgtattagca ggagctggta attacttgta ttatcacatg taactaataa 180  
 tttgaactat acttgaagga ccgtgttgat gtcagggtatt tacagtgggtt ggaagatagc 240  
 agtattatta gcataagctg catacgtaat attcagtaac tgccatatta tataacaaat 300  
 ttacattcgc aaattcagta tcctgtttaa gtgtcatatt cttgtaatct gcattctcca 360  
 ggagttttat gtgtttaata gatgaattta ttttatttnt aaaggatttc aaatgntttc 420  
 agccnctat aggagaaata cccaagtata ttctagttcc ttnatgtccc tgnaccctcg 480  
 gccngaccca cgctaaaggg cgaaatncaa ncnactggg nggn 524

<210> 585  
 <211> 618  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(618)  
 <223> n = A,T,C or G

<400> 585  
 actgactata atcaaaactcc gaataccatt aaaattaagc tatgcagtcg gaacgtgggt 60  
 gataacgtcc acgctcgcca ggggaacaac ccagatcgtc agctaaggtc ccaaaattgt 120  
 gttaagttag aaaggttggt agatttcata aacaactagg aagttggctt agaagcagcc 180  
 acctttttaa gagtgcgtaa ttgctcacta gtcaagagat cttgcgccaa taatgtaacg 240  
 ggactcaaac acaataccga agctacgggc acattatgtg cgttaggaga gcgttttaat 300  
 ttcgttgaag tcagaccgtg aggactgggt gagagattaa aagtgagaat gccggcatga 360  
 gtaacgattc gaagtgaaga tcttcgacgc ctattgggaa aggtttcctg ggcaaggttc 420  
 gtccaccagc ggggttagtca gggcctanga tgaggcanaa atgcatagtc gatggacaca 480  
 ggtaaatatt cctgtacctt cggncgngaa cacgctaagg gccgaattnc agcacacttg 540  
 gcggngggtc ctagtnggat cccanctntg ganccaactt nggggtaatc ntgggcttan 600  
 ctggttccct ggtgaaat 618

<210> 586  
 <211> 337  
 <212> DNA  
 <213> Homo sapiens

<400> 586  
 acaagctttt tttttttttt tttttttttt tgtttcaagt tttaatcaaa gcttgtatat 60  
 aagattactt tattcctgca tcttctcaat ggtttcttcc ttgtatttgc ccttttcctt 120  
 tcctacttgg cgagatttgg ctttccgttc gaggatcttt ttgcgggtctt tgtccagttt 180  
 tagcctagtg ataaccactt tgctgggggtg aatccctacg tggacagttg tgccattagc 240  
 cttttccgc tgcaccggtt caatgtagat aacatatttc ttccctgtaa cctggactac 300  
 tttgcccaatt tgctgacctt tatagtgtcc acgtacc 337

<210> 587  
 <211> 656  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(656)  
 <223> n = A,T,C or G

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<400> 587
cgagggtacaa gctttttttt tttttttttt ttttttttct gaggagtggc atggagttct      60
ttaatttgggaggcaaaagg ttacattttaa tgaaaggcag aggctggatt aataaatgtt      120
tggtanaaag ttgttctgac acacagtga ctctgggctt ttctcctgca taaaaagcag      180
agctagcagt aagtgcaa ntgaagaaaa tccatgtgtc caataagctg ccatctccan      240
aactcttatc caggaaattc aaagagtga cattctttta gtctcctact cctcaattaa      300
gtaaatgaga atgattcagc caacaaagt catgacaaca aggtgcagga tgggtgctggc      360
aaanagaaaa tnagcaaagg ctcgctctgg ggagatgcct tggaaatccn ntttgntctg      420
ngggttgatc tgnattcttc agggnaaacc cgctagggat gaaacttccc acccnaagan      480
aatgaaaccc cgaaagaaaa agangtttaa aggggaaagg nccccngan ggagaccagt      540
taccggaact tggaaacncc ccggcaagca atttttctnc ggcagggtnc cctggcccn      600
ggcgccntt tnaaaagggg gcaattncca ngncacttgg gggggcggtt tttngg      656

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<210> 588  
 <211> 586  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(586)  
 <223> n = A,T,C or G

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<400> 588
actcaaacac agggggggttgc tcatatgt caagaactga tacaatcaca gtgccagtgg      60
cagtcagcct ccttggcaag ccttgatcca cagctttcaa agagagggtg tatactgcct      120
ggagttctct gtccaaagg ttttctaact gaataattcc agataattcg ttaatggaga      180
actgcccatac agcagagtca atcagtga ataaaaatctt ccgatttaat cctgcgtcgg      240
catctgtggc ctgcactctt gtcagcagc ttcccggctc tgtgttttca aacacggtga      300
tggcataagg atcggcagag aattcggggg cattatcgtt cacgtcttct agcgtgagca      360
caatactggc ttggtagaat ctctcctc catctgtggc cctgacgaga agatgataaa      420
cagcttgctc ctnacgatca aaggggggtt gacgttttca agtcacctgg nctggattaa      480
tttgaatttt ctgcacctga cccaatacgg taagtattca gcgtaaccgg atgttgcgtt      540
gacanaaact gatgacattt tccgaaggac tnttaggaaa aggtga      586

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<210> 589  
 <211> 645  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(645)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 589

acaagcagta	ttagaaaatc	tttttggcaa	gggagagaaa	taaatacaaa	tggaatgcta	60
cattttttaa	ttagcaaaact	gtctcaggaa	tgataaagggt	atcagtaaag	tagcaagggg	120
ataactttta	aacattatct	gtctggggct	caaaaaacac	tcaaaacaat	ttattttaaag	180
ggtgcacaag	agctatgtcc	aggcatttac	gcttatggga	agtaaaatta	aaagaggata	240
cttttttccc	aaggagaatt	tctttaaaac	caagcacatt	gctaaatagc	aacattatac	300
tcggtaaaca	ataattggca	acaaaataag	tttaatatct	tgcccaaacc	agtcccagat	360
actgtttaat	aaccaagata	caaactaatt	ttgttgnaac	aagcctagac	caattttatc	420
aaacatgtcc	ttgggttagat	atccaatttc	atttaacggt	tttgnaagct	canttgacag	480
ccagtcnagt	ccttnatacn	gacccagttc	cntgggggtg	gcacaaaagt	ggnttggacc	540
ataccaccca	ttcaaaaagg	cgcatntngg	ttcttggccc	aaaaaatccn	ggnaaaaaaa	600
agggganggga	aattattnaa	gggncccttg	ggnggnaatg	ggcnc		645

&lt;210&gt; 590

&lt;211&gt; 464

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 590

ggttcttgac	gaggctgcgg	tgtctgctgc	tattctccga	gcttcgcaat	gccgcctaag	60
gacgacaaga	agaagaagga	cgctggaaag	tcggccaaga	aagacaaaga	cccagtgaac	120
aaatccgggg	gcaaggccaa	aaagaagaag	tggtccaaag	gcaaagtctg	ggacaagctc	180
aataacttag	tcttgtttga	caaagctacc	tatgataaac	tctgtaagga	agttcccaac	240
tataaactta	taaccccagc	tgtggtctct	gagagactga	agattcgagg	ctccctggcc	300
agggcagccc	ttcaggagct	ccttagtaaa	ggacttatca	aactggtttc	aaagcacaga	360
gctcaagtaa	tttacaccag	aaataccaag	ggtggagatg	ctccagctgc	tggtgaagat	420
gcatgaatag	gtccaccagc	ttgtacctgc	cgggcggccg	ttcg		464

&lt;210&gt; 591

&lt;211&gt; 387

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(387)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 591

ggaagacgga	ggtcctcttt	ccttgccctaa	cgcagccatg	gctcgtggtc	ccaagaagca	60
tctgaagcgg	gtggcagctc	caaagcattg	gatgctggat	aaattgaccg	gtgtgtttgc	120
tctcgtcca	tccaccggtc	cccacaagtt	gagagagtgt	ctccccctca	tcattttcct	180
gaggaacaga	cttaagtatg	ccctgacagg	agatgaagta	aagaagattt	gcatgcagcg	240
gttcattaaa	atcgatggca	aggtccgaac	tgatataacc	taccctgctg	gattcatgga	300
tgatcatcag	attgacaaga	cgggagagaa	tttccgtctg	atctatgaca	ccaagggctg	360
ctttgctgta	cctnggccgc	gacacgc				387

&lt;210&gt; 592

&lt;211&gt; 648

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(648)  
 <223> n = A,T,C or G

<400> 592  
 ggtacaaaaca ttttacaaaa aagaacatta ccaatatcag tggtagtaag ggcaagctga 60  
 agaataaaata gactgagttt ccgggcaatg tctgactca aagacatcca aactgcgttc 120  
 aggcagctga aacaggcttc tttcccagtg acaagcatat gtggtcagta atacaaacga 180  
 tggtaaatga ggctactaca taggcccagt taacaaactc ctcttctcct cgggtaggcc 240  
 atgatacaag tggaaactcat caaataattt aaacccaagg cgataacaac gctatttccc 300  
 atctaaactc atttaagcct tcacaatgtc gcaatggatt cagttacttg caaacgatcc 360  
 cgggttggtca tacagatact tgntttttac acataacgct gtgccatccc ttccttcaact 420  
 gncccagtcga ggtttcctgt tgntggaccg aaaggggata cattttanga aaatgctttc 480  
 ttcaagacag aaatgagaaa gaaaanggaga accctgagge caggaaacta ttaaaccttg 540  
 ggggtngnnc nccaaaaggg aagggggnaa aggcnggaa tttgaaaagg ntaaaaccgn 600  
 ttccttttgn gncccaggga attaggga aa ccttgactna cntttggg 648

<210> 593  
 <211> 625  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(625)  
 <223> n = A,T,C or G

<400> 593  
 ggtacttaaa atcagagtc aaaaatgggt ttaagtttta atactcttaa ttagctccct 60  
 gctttatact gtaactccac agaagacata gggccaccta ggattcacag gaaggagcag 120  
 ctctgattct tacatggctg gctccgatgc cccacagca ggcctcttc tcccaagtt 180  
 tttcctctcc atttcaaaaa agcactattt tatcttcaca tccaagagct ggttggttg 240  
 gtttggtttc ttggaaacca ataaaagaag caattttttc ctggtctttt tactcacatc 300  
 tacctatcag agcggctatt tccttcgaca gttcagtagc acacaggctg acttggccac 360  
 atggactcat gaatgcatgc attcagaccg catattgcta ccaaattggga atgtgggaat 420  
 atgctatgca cctcagggtg agaaatgacc aagaaaatca agatctaaag gggatgata 480  
 taatatatat atatatcaat gctattattc ataaaaacct tggtagtaa taaaaaaat 540  
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 cttntgnaa aagccggggc ctttt 625

<210> 594  
 <211> 586  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(586)  
 <223> n = A,T,C or G

<400> 594

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## PCT/IB99/01062

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gtcaaggcca	tgggtgctcaa	cttcttgaaa	cagttcatag	atactacact	gaattttccta	120
cagttcttga	tattacagcg	gaagatccat	ccaaaagcta	tgtgaaatta	cgagactttg	180
tgcttgtaga	gctttgtcaa	gatttgcctt	gtttttcccg	ggaaaaatta	atgcaaggat	240
tcaatgaaga	tatggcgata	gaggcacaac	agaagttcaa	aataaataag	caacacgcta	300
gaaggggtta	tgaaattctt	cgactactgg	taactgacat	gagtgatgcc	gaacaatata	360
gaagctacag	actggatatt	aaaagaagac	taattagccc	atataagaaa	aagcagagag	420
atcttgctaa	gatgagaaaa	tgtctcagac	cagaagaact	gacaaaccag	atgaaccaaa	480
tagaaataag	catgcaacat	gaacagcttg	gaananaagt	tttcanggnc	tagtggaaga	540
ataccccggc	gtggtattga	acnacttgct	caagagttaa	gaattt		586

<210> 595  
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 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (..) (613)  
 <223> n = A,T,C or G

<400> 595						
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ttgagaaatg	tgattcttga	ctggaaaaat	agatgtgtcg	tggaggccga	atgtttgcac	120
caacccaaaac	ctggcgccgt	tggcatcgta	gagtgaacac	aacccaaaaa	cgatacgcca	180
tctgttctgc	cctggctgcc	tcagccctac	cagcactggg	catgtctaaa	ggcatcgta	240
ttgaggaagt	tcctgaactt	cctttggtag	ttgaagataa	agttgaaggc	tacaagaaga	300
ccaaggaagc	tgttttgctc	cttaagaaac	ttaaagcctg	gaatgatata	aaaaagggtc	360
atgcctctca	gcgaatgaga	gctggcaaag	gcanaatgag	aaaccgtcgc	cgtatccagc	420
gcagggggccc	gtgctcatct	ataatgagga	tnaatgggat	catcaaggcc	tttagaaaaca	480
tcctggaaat	acctctgctt	aatggtaagc	caagcttgac	cattttgaaan	ncctgttctg	540
gtgggccttt	tgggacgttc	tggatttgga	cttgaaaggc	ttttccggaa	ttnnatgaaa	600
tgncnncgg	ccc					613

<210> 596  
 <211> 616  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) (616)  
 <223> n = A,T,C or G

<400> 596						
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aagttttcta	tgcccagtgt	tcctgacttc	gaaacgctat	tctcacaggt	tcagctcttc	120
atcagcactt	gtaatgggga	gcacattcga	tatgcaacag	acacttttgc	tgggctttgc	180
catcagctaa	caaatgcact	tgtggaaaga	aaacagcccc	tgcgaggaat	tggcatcctt	240
aagcaagcca	tagacaagat	gc...gatgaat	acaaaccagc	tgacctcaat	acatgctgat	300
ctctgccagc	tttgtttgct	agcaaaatgc	tttaagcctg	ccttccatat	cttgacgtgg	360
atatgatgga	tatctgtaaa	gagaatggag	cctatgatgc	aaaacacttt	ttatgntact	420
actattatgg	agggatgatt	atactgggct	gaaagaactt	tgaaagactc	tctactttta	480

tgaacaggct	atactacttc	tgcattggcg	cagtcataatc	atgtgggaac	atttaaaagn	540
ntatttanng	gcttgaatac	ctggcaaaaga	cctgnccggc	gccgttcaaa	ggggaattca	600
ccacttgng	gcgtnt					616

<210> 597  
 <211> 631  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(631)  
 <223> n = A,T,C or G

<400> 597						
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tcgtgtctag	ggaaaaacag	agacccaagt	tcccagaagc	ctggaaagaa	aatagcctgg	120
cagtggagtc	actcaaggag	acaatcgaag	actgttgga	ccaggatgca	gaggctcggc	180
ttactgcaca	gtgtgctgag	gaaaggatgg	ctgaacttat	gatgatttgg	gaaagaaaca	240
aatctgtgag	cccaacagtc	aatccaatgt	ctactgctat	gcagaatgaa	cgcaacctgt	300
cacataatag	gcgtgtgcca	aaaattggtc	cttatccaga	ttattcttcc	tcctcataca	360
ttgaagactc	tatccatcat	actgacagca	tcgtgaagaa	tatttcctct	gagcattcta	420
tgtccagcac	acctttgact	atagggggaa	aaaaaccgga	aattcaatta	ctatgaaccg	480
acagcaaggc	acaaagctcg	aatncccaag	cccttgaaac	aagtggtaac	cagcttttca	540
ccacancacc	aaccnncaaa	cnccccaggg	anttacgccc	aagggtacctt	nggccgggaa	600
cccncttang	gggnaattcn	cgnccttg	g			631

<210> 598  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(630)  
 <223> n = A,T,C or G

<400> 598						
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ctcccgcgg	ccgtctcctt	aacaccgaac	accatgcctt	caattaagtt	gcagagttct	120
gatggagaga	tatttgaagt	tgatgtggaa	attgccaaac	aatctgtgac	tattaagacc	180
atgttggaag	atgttggaat	ggatgatgaa	ggagatgatg	accagttcc	tcctcctcct	240
cctcctgaag	atgatgagaa	caaagaaaag	cgaacagatg	atatccctgt	ttgggaccaa	300
gaattcctga	aagttgacca	aggaacactt	tttgaactca	ttctggctgc	aaactactta	360
gacatcaaag	gtttgcttga	tgttacatgc	aagactgttg	ccaatatgat	caaggggaaa	420
actcctgagg	agattcgcaa	gaccttcaat	atcaaaaatg	actttccctc	tttttttgta	480
agcaatggct	ggctaagtta	atgggccagg	taacnttttag	tgacctttta	aaaagtttgg	540
ccattggnaa	atnaaaccac	ttgcaaaaaa	gttttntgga	atagaatttc	cnaatatttt	600
cctttttcat	gagtgggaac	tgggnaaagg				630

<210> 599  
 <211> 359  
 <212> DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 599

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atctagtggg	gtatagtgc	cggaaatcgg	actgtcttgc	caacatggaa	acatcgtgct	120
cttttgattc	ttccatctgt	agtggagaag	gggatgatag	tttaaggata	ggtggacaag	180
ttcatgctgt	ccaggcttta	gtgcagctat	tccttgagcg	agagcgggca	gcccagctag	240
cagaaagtaa	aacagatgag	ttgatcaaag	atgctccac	cactcagcat	gataagagtg	300
gagagtggca	agaaacaagt	ggagaaatac	agtgggtgct	aactgaaaag	actgatggt	359

&lt;210&gt; 600

&lt;211&gt; 589

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(589)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 600

acccagggac	acaaacactg	tgggaaggctg	cagggacctc	tgcctaggaa	agccaggtat	60
tgtccaaggt	ttctcccat	gtgacagtct	gaaatatggc	ctcgtaggaa	gggaaagacc	120
tgaccgtccc	ccagcccgac	accataaaag	ggtccttgc	gaggaggatt	agtaaaagag	180
gaaggcctct	ttgcagttga	gataagagga	aggcatctgt	ctcctgctcg	tccctgggca	240
atggaatgtc	tcggtttaaa	acccgattgt	atattctatc	tactgagata	ggagaaaact	300
gccttagggc	tggagatgag	acatgctggt	ggcaatactg	ctctttaatg	cattgagatg	360
tttatgtatg	tgcacaaaaa	agcacagcgc	ctttttcttt	acctcgttta	tgatgcagag	420
acatttggtc	acatgttttc	ctgctgactc	tctcccacta	ttaccctatt	gcctgccaca	480
tctccttttc	gaaanggtag	agataatgat	caataaatac	tgagggactn	aganactggg	540
ccgcgtaagt	cctaatatct	gaacgccagt	ccctggccca	ntttttnt		589

&lt;210&gt; 601

&lt;211&gt; 240

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 601

acatctgaaa	taccccccaa	accagaaaag	cttttcaaca	gctaggttgt	ccaagaactt	60
ggaaaattca	ccttctgatg	tctccaaga	cagattccat	tttttatata	ccttatttgc	120
tcagacctgt	aacttcagrc	tggagtgaac	acagacacct	agttttcttc	aaactcctct	180
tgggctttag	agagaaggcg	ctggcccttt	gagccaagca	ggttattggt	tagtagtacc	240

&lt;210&gt; 602

&lt;211&gt; 621

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(621)

&lt;223&gt; n = A,T,C or G

```

<400> 602
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acttacaaga atggagaatc tgcttataag tcaaaactaga attagaactt atttcttaga 120
ctgcttcata aaaactaaca taccactact ttttaattat ttattttattt gctaaagaac 180
aaaaatttaa gtatgaaaaa caaccaactg attcacccaa ctcagtaagt ttgactcacg 240
ttttctgggt caacaccaat gtcttcacaa aatttctcca tgccttcagg gcctacaaca 300
tcatcagttc ctgcatattc atagaacat tccaagcacc ttttacttga aaaggcttct 360
tcttcagtct ttattctagt cgaatcatat tttctataca tgctatcatg tctacttttc 420
ttggcagata aatcatctcc agaagcagggt cttctctttt tccttgggtg catcacttta 480
ttaagcagt ctgaagaact gnaagaaccg agacttcttg gtttggcgac gncttggnga 540
nggctctggg anggtcaanc ttattaangg ngngggaaaa ccttntgaan atttgcccn 600
gttganagat gaaaagtcnn g 621

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```

<210> 603
<211> 655
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1) ... (655)
<223> n = A,T,C or G

```

```

<400> 603
acttataatt ggcagtggag gaaggggaaca tacgctggcc tggaaacttg cacagtctca 60
tcatgtcaaa caagtgttgg ttgccccagg aaacgcaggc actgcctgct ctgaaaagat 120
ttcaaatacc gccatctcaa tcagtgaacca cactgccctt gctcaattct gcaaagagaa 180
gaaaattgaa tttgtagtgg ttggaccaga agcacctctg gctgctggga ttgttgggaa 240
cctgaggtct gcaggagtgc aatgctttgg cccaacagca gaagcggctc agttagagtc 300
cagcaaaagg tttgccaagg agtttatgga cagacatgga atcccaaccg cacaatggaa 360
ggctttcacc aaacctgaag aagcctgcag cttcattttg agtgcagact tccctgcttt 420
ggttgtgaaa gggcancggg cttgcaactt ggnaaaaggg tgaatgggtg ccaaagaagc 480
caaagaaana aggnccctgca aagcntgtan cctttggggc gggaaccacg cttaangggc 540
cnaaattcca agnacaactt ggccggggcc gttacctaaa ngggatccca actttngggg 600
acccaaaacn ttngggngna aatcatnggg ncnaaaantt tggtttccct gngng 655

```

```

<210> 604
<211> 490
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1) ... (490)
<223> n = A,T,C or G

```

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<400> 604
acaacacacg aattccactc taaacttgaa cgcaaagcta tgttcctctc tgccatcatg 60
cagtgggcca cagcatcctt caatctttta gttgagcgat acaactccac tagccggatg 120
ttcacatgga cgtcatcagg tcttacataa agtttgact gaatcaagtc aaaaagtta 180
ttccatccat cttcaccttc acaatctaga agctgttctt ttagtttata aattgcagga 240
cttcctggga aaagtgttgc tgetctttcg acccagtatt ttgctcttcc atcaggtaac 300
atcattttta caaagcaatt ctgcaatctt caacacaaga tcttttgtgt tgggtttaat 360

```



tccactgaac	gacctgaaca	ttnaacggnt	ttctctgtgt	tttcttccat	tcataaagan	420
gacccagaaa	tctgtgagct	ttgggatccc	tctctcgcac	attaaatgta	agtacctngg	480
gncgcgacca						490

<210> 605  
 <211> 612  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(612)  
 <223> n = A,T,C or G

<400> 605						
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ttgagaaaatg	tgattcttga	ctggaaaaat	agatgtgtcg	tggaggccga	atgtttgcac	120
caaccaaaaac	ctggcgccgt	tggcatcgta	gagtgaacac	aacccaaaaa	cgatacgcca	180
tctgttctgc	cctggctgcc	tcagccctac	cagcactggg	catgtctaaa	ggtcacgta	240
ttgaggaagt	tcttgaactt	cctttggtag	ttgaagataa	agttgaaggc	tacaagaaga	300
ccaagggaagc	tgttttgctc	cttaagaaac	ttaaagcctg	gaatgatatc	aaaaaggctt	360
atgcctctca	gcgaatgaga	gctggcaaag	gcaaaatgag	aaaccgctcg	ccgtatccag	420
ccgcaggggc	ccgtgcatca	tctataatga	ggataatqgg	tatcatcaag	gccttcagaa	480
acatccctgg	aattactctg	cttaatgnaa	gcaagctgac	atTTTTgaac	cctgcttctg	540
gnggcctgt	nggactttct	gcatttggac	tgaaantgct	tttcggaagt	ttantaantg	600
gacctnngcc	cc					612

<210> 606  
 <211> 577  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(577)  
 <223> n = A,T,C or G

<400> 606						
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cgtgccagtc	aagaagaaaa	aggtttgcac	tctcacattg	ccaggatgat	aagttccttt	120
ccttttcttt	aaagaagttg	aagtttagga	atcctttggg	gccaaactgg	gtttgaaagt	180
agggacctca	gagggtttacc	tagagaacag	gtggttttta	aggggttatct	tagatgtttc	240
acaccggaag	gttttttaaac	actaaaatat	ataatttata	gttaaggcta	aaaagtatat	300
ttattgcaga	ggatgttcat	aaggccagta	tgatttataa	atgcaatctc	cccttgattt	360
aaacacacag	atacacacac	acacacacac	acacacacac	aaaccttctg	cctttgatgt	420
tacagattta	atacagttta	tttttaaaga	tagaatcctt	ttataggtga	gaaaaaaaca	480
atctgggaag	aaaaaaccac	acaagacatt	gacagcctg	ttngcgtttc	canangtctt	540
tgattggcag	catgggttnca	aggaaantag	gtacctc			577

<210> 607  
 <211> 312  
 <212> DNA  
 <213> Homo sapiens

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<400> 607
gggtaccaggc cgtccaccac agtccgtggt tcagcttccc ccacgtcaat cttctctaca      60
tacaggctgt ctgcattctg gtgcttctcc acagtgatga ttttccccac acggatatcc      120
agccgggatg ggatgacctc ctctgggtct gaattcttgg cagggccttt ggccattggc      180
ttctgctttg agggatctgg gtaggcagcg ctggccagtt ttttcagggc aggggtatta      240
aacttttccc ggattggatc cagcaacttg ttcagtgcga cttcaacaga attcttcagg      300
tctccaggat gt                                     312

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```

<210> 608
<211> 614
<212> DNA
<213> Homo sapiens

```

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<220>
<221> misc_feature
<222> (1)...(614)
<223> n = A,T,C or G

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<400> 608
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tgccgccgaa gtctgacccc aacgagatca aagtcgtata cctgaggtgc accggagggtg      120
aagtcgggtgc cacttctgcc ctggcccccag agatcgcccc cctgggtctg tctccaaaaa      180
aagttgggtga tgacattgcc aaggcaacgg gtgactggag gggcctgagg attacagtga      240
aactgacctat tcagaacaga caggcccaga ttgagggtgg gccttctgcc tctgccttga      300
tcatcaaagc cctcaaggaa ccaccaagag acaaagaaac agaaaaacat taaacacagt      360
jggaatatca cttttgatga gattgtcaac attgctcgac agatgccggc accgatcctt      420
agccagagaa ctctctggaa ccattaaaga gatctgggga ctgccagtc agtgggctgn      480
aatgggtgatg gcccgcatnc ttatgacttc atcgatgaca tcaacagtgg tgctgtggaa      540
tgcnagccgg ttaanccnaa ggaaacttta atnanggtca ttgactggn aaaaaaaaaa      600
nnaananaaa ggnt                                     614

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```

<210> 609
<211> 609
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(609)
<223> n = A,T,C or G

```

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<400> 609
gggtactgagc acccctgttg tcaagaaagt gggagtaaca tctgtaggag gttctttaac      60
tggtggggcca aatatataaa caactctgtt aacgttgtga cacatgcgag gtataagcct      120
agccagaaaa ataagtgatt ccagtcagg ttcattctta ctggagattc cacacacgta      180
attgtaggaa cgacagtcac cctgcacacc tacagtctta attggcagca agaaggcatt      240
cagtgaatgc agactggtaa tttgcatcag cttctcctga tctctctctg ttgtgcaggc      300
tttgactctc tgtaataggg tatgtggctt tttaacactt gcagaaaaat cagctactat      360
tttcaaaaata ttgttqattt caggaaaagtc cttacaaata taaggttctt cagcacatat      420
tactctgatt gccaggccag gacctggaaa tggatgcctg gaaactaact cttctggaag      480
tccaagttct cttggccaaa attctcactt catctttatg aaaatctttc agaggcttat      540
acttttcttc ctttttaact ttctgaatga ctcttgggna tttggaangg tttgatgagt      600

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tcactttnc

609

<210> 610  
 <211> 254  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(254)  
 <223> n = A,T,C or G

<400> 610							
accattggtg	gccaattgat	ttgatggtaa	gggagggatc	ggtgacctcg	tctgttatgt		60
aaaggatgcg	tagggatggg	agggccgatg	aggactagga	tgatggcggg	caggatagtt		120
cagacggttt	ctatttcctg	agcgtctgag	atgttagtat	tagttagttt	tgttgtgagt		180
gttaggaaaa	gggcatacag	gactaggaag	cagataagga	aaatgattat	gagggcgtga		240
tcataaaaga	cctn						254

<210> 611  
 <211> 687  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(687)  
 <223> n = A,T,C or G

<400> 611							
ggtacaagga	tgccatccat	ttctataaca	agtctctggc	agagcaccga	accccagatg		60
tgctcaagaa	atgccagcag	gcagagaaaa	tcctgaagga	gcaagagcgg	ctggcctaca		120
taaaccgccga	cctggctttg	gaggagaaga	acaaaggcaa	cgagtgtttt	cagaaagggg		180
actatcccca	ggccatgaag	cattatacag	aagccatcaa	aaggaaccgg	aaagatgcca		240
aattatacag	caatcgagct	gcctgctaca	ccaaactcct	ggagttccag	ctggcactca		300
aggactgtga	ggaatgtatc	cagctggagc	ccgaccttca	tcaagggggt	atacacggaa		360
agccgctgca	ctggaagcga	tgaaggacta	cacccaaaag	cccatggatg	tgtacctgcc		420
cgggcccggcc	gctcgaaaag	ggcgaaattn	agcacactgg	ccggccggta	cttagtggga		480
tncnancttc	ggtaccaaac	ntngcggnaa	tcattgggcat	ancnnggttc	ctngggngga		540
aaattggtaa	tnccgtttac	natttcccca	ccaacttccn	aaccggaaa	ccttnaagng		600
gaaanccntg	gggnggccta	atggnggggc	ttactcncct	taattggcct	gggcctaatg		660
ggcccccttt	caatngggaa	acctnnt					687

<210> 612  
 <211> 673  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(673)  
 <223> n = A,T,C or G

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<400> 612
gactgatgtt ggtgtcctgc agcgccacgt ttcccggcac aaccaccgga acgaggatga      60
ggagaacaca ctctccgtgg actgcacacg gatctccttt gagtatgacc tccgcctggt      120
gctctaccag cactggtccc tccatgacag cctgtgcaac accagctata ccgcagccag      180
gttcaagctg tgggtctgtgc atggacagaa gcggctccag gagttccttg cagacatggg      240
tcttcccctg aagcaggtga agcagaagtt ccaggccatg gacatctcct tgaaggagaa      300
tttgcgggaa atgattgaag agtctgcaaa taaatttggg atgaaggaca tgccgcgtgc      360
agactttcaa cattcatttt gggttcaagc acaagtttct ggccagccga cgtggtcttt      420
ngcaccatgt ctttgatgga gagccccgan aaaggatggc tnaaggaccg aatcacttta      480
tncaggcttt tggacangcc tnttcaggag tnaccctgga caaacttgta cttttgggnc      540
ggngaacacc ncttaagggc naatttcang cacactggcg ggccgtaatt aaggggaatcc      600
aacttnggna nccaancttg gggnaaanncn tgggcataan ngttccctgn ggnaaatngt      660
attccctncc aat                                     673

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<210> 613

<211> 279

<212> DNA

<213> Homo sapiens

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<400> 613
ggtacaaaag gagacaatcc atccccgaaa gtcataataag atgaactctt cctgtgcaga      60
tatcctgctc tttgcctcct ataagtggaa tgtctcccgg ccctcattgc tggctgactc      120
caaggatgtg atggacagca ccaccaccca gaaatactgg attgacatcc agttgcgctg      180
gggggactat gattcccacg acattgagcg ctacgcccgg gccaaagttcc tggactacac      240
caccgacaac atgagtatct acccttcgcc cacaggtgt                                     279

```

<210> 614

<211> 653

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(653)

<223> n = A,T,C or G

```

<400> 614
gtttccacaa acttcgtgga tcaaaacgag gtcttccagt tctgcggggtc agaaggctga      60
cccggggctc aaatctgggt gtgcgcagtc ctgcactcct tctggaggct ctaggggaga      120
attcattttct ggctttttca ttttttagagg ctgaccgtaa ttcttgactt caggctcctc      180
catcttcaga gccagctgtg ggtagttgaa tctttttccc gtcacctcat tgaggcctcc      240
cctctcctgc ctccctcacc cacttttttt tttttttgag acagggtctt gctgtgttgc      300
ccaggctgga gtgcagtggc ctgggtcatgg catcaaggct cactgcagcc tggacctcct      360
ggttcaagtg atcctcttgt ctacgtcccc tgagacaatc cccacgccc agctacatat      420
tttttgtgga tacagggtct cattctgntg cctagcttgt ctggaactcc tgggtcaag      480
ggatcttgga gccttaacct tnctaaagtg cttgggaata taggcatgag tcaactggacc      540
ttgggnccga ccaccttaan ggccgaattt cagcacaatt ggcgggccgg tacttagggg      600
annccaactt tgggaccaac ntggngnnaa tcatgggcn aactggttnc cng                                     653

```

<210> 615

<211> 676

<212> DNA

<213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(676)  
 <223> n = A,T,C or G

<400> 615  
 acatgtgaag atttttttggc agcttagcgt ggaaaccatt gatcaccttg ctctcatttc 60  
 tacctgttct gtgttggcaa gggagagtgc ccaaagagc aagatatcgc agcaaacag 120  
 cactccaggg gtgaacggaa ttagtggttat ccatacccag gcacatgcc ggggtttaca 180  
 gcaggttctt cagctgggtgc ctgctggccc tgggggagga ggcaaagctg tggctcccag 240  
 caagcagagc aaaaagagtt cgcccatgga tcgaaacagt gacgaagtat cggcaacgcc 300  
 gagagaggaa caacatggct gtgaaaaaga gcccggttga aaagcaagca gaaagcacia 360  
 gacacactgn agagagtcaa tcagctcaaa gaagagaatg aacggttgga aagcaaaaat 420  
 caaattgctg accnanggat taagtgtacn gaagcatgcc aacgccttag ctatggggcc 480  
 tggctnctat cagcttggga acccnaaagn accagttttt ccangaatcc ccagaccgaa 540  
 ngggnccaag gggnccaacg ttcgggactt gaaangggaa aaaaaacttg gancttggca 600  
 aggacttggg cttncnaaat tgganccgan cccaanggat gaanaacccc ttcaagaaaa 660  
 ccagcttctt ttctng 676

<210> 616  
 <211> 694  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(694)  
 <223> n = A,T,C or G

<400> 616  
 ggtaccttct agatcttgga gttgatatga atgaaccaa tgcctatgga aatacacctc 60  
 ttcattgtagc ctgtctataat ggacaagatg ttgtagtga tgaacttata gactgtgggtg 120  
 ctattgtgaa tcaaaaagaat gaaaaaggat ttactccttt gcactttgct gctgcatcaa 180  
 cacatggagc attgtgttta gagcttcttag ttggcaatgg ggccgatgtc aatatgaaga 240  
 gtaaagatgg gaaaacccca ctacacatga ctgctctcca cggtagattc tcccgatcac 300  
 aaaccattat ccagagtggg gctgtaatcg actgtgagga taagaatgga aatacccctt 360  
 tgcacatagc aacacggtat ggccatgaan ctgctgatca acacttctta ataccagtgg 420  
 gtgctgaccc ttgcaaannc gtgggcatac cttggaatgg ttcccccttc cattttggca 480  
 agcccttaaa ccgntttttt caagaattac tggcnnaaaa accttcttc ttttanggaa 540  
 ttnganattn gaaanccccc aanggaattt tngccnggac cttgggntaa catgccantt 600  
 gnnacttggg agggnaattt gggaanggcc tnaaaccttt tngngnnaaa cctggggccn 660  
 aacntttatt aaaangggcc caatttnggg gaan 694

<210> 617  
 <211> 554  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(554)  
 <223> n = A,T,C or G

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<400> 617
cgaggtagcg caagggaaag atgaaaaatt ataaccaagc ataatatagc aaggactaac      60
ccctatacct tctgcataat gaattaacta gaaataactt tgcaaggaga gccaaagcta      120
agacccccga aaccagacga gctacctaag aacagctaaa agagcacacc cgtctatgta      180
gcaaaatagt gggtagattt ataggtagag gcgacaaacc taccgagcct ggtgatagct      240
ggttgtccaa gatagaatct tagttcaact ttaaatttgc ccacagaacc ctctaaatcc      300
ccttgnaaat ttaactgtta gtccaaagag gaacagctct ttggacacta ggaaaaaacc      360
ttgtagagag agtaaaaaat ttaacaccca tagtaggcct aaaaagcagc caccaattaa      420
gaaagcggtc agactatatc tattgcgcca ggtttcaatt tctatcgcta tactttatct      480
gggtaaaatg gggttggtt aagggtggct nggaagaaag gtggaatngg aactgcccg      540
gcnggccgct ngaa

```

```

<210> 618
<211> 305
<212> DNA
<213> Homo sapiens

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```

<400> 618
acatgtgttc acaaggggta ctctcaaaa cccccagttc tcactcatgt ccccaactca      60
aggctagaaa acagcaagat ggagaaataa tgttcctgctg cgtccccacc gtgacctgcc      120
tggcctcccc tgtctcaggg agcaggtcac aggtcaccat ggggaattct agccccact      180
ggggggatgt tacaacacca tgctgggtat tttggcggct gtagttgtgg ggggatgtgt      240
gtgtgcacgt gtgtgtgtgt gtgtgtgtgt gtgtgtgttc tgtgacctcc tgtccccatg      300
gtacc

```

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<210> 619
<211> 604
<212> DNA
<213> Homo sapiens

```

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<220>
<221> misc_feature
<222> (1) ... (604)
<223> n = A,T,C or G

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<400> 619
acactctcat agtcactgaa agtaatatac actgacctgc aaaagtcaga tgggaagaca      60
taaaggacct catcttttgt tattagtggg tgaaaagaat ctccatctgt tccattaatc      120
atattgcact tgtctgttat ccaccagtca agtgacgttt tcccattcca ttccacaatt      180
tttgtaaagt taaggtaact gtcttctcca gttagaaaaa catagtctcc atcattagtc      240
ccatttttct catagaatag gccaaaatag ggagagatat cgggcctgaa aacatggata      300
agggacaaga tttcatcttt gtagccccag agcaattcgt caactgtgtg agtcacaaag      360
agcttctgct gataggcttt caacatggcc tcgatgatct ccctgaggaa gtgcacctgg      420
gaccactcta tgacagtcaa tacaggaata tttaatggtc taattaagtn aaattttaag      480
ggctncaaca gattgggtct cgttcaaaac cataggcctt gttgctaaca gcaganattg      540
gtgggttcatt atctncaaat ggaaaattng ctttggttct ggagtnccctg naagggtatg      600
gncc

```

```

<210> 620
<211> 571
<212> DNA
<213> Homo sapiens

```

<220>  
 <221> misc\_feature  
 <222> (1)...(571)  
 <223> n = A,T,C or G

<400> 620  
 ggtactgtga acatgacttt cagatgctct ttgccccttg ctgtcatcag tgtggtgaat 60  
 tcatcattgg ccgagttatc aaagccatga ataacagctg gcacccggag tgcttccgct 120  
 gtgacctctg ccaggaagtt ctggcagata tcggggtttgt caagaatgct gggagacacc 180  
 tgtgtcgccc ctgtcataat cgtgagaaag ccagaggcct tgggaaatac atctgccaga 240  
 aatgccatgc tatcatcgat gagcagcctc tgatattcaa gaacgacccc taccatccag 300  
 accattttcaa ctgcgccaac tgcgggaagg agctgactgc cgatgcacgg gaactgaaag 360  
 ggggaactat actgncttcc atgccatgat aaaatggggg tcccattgng gtgcttgcca 420  
 cggccatcaa ggcgctgtga cctatggcaa catgcatgtg gacatttggt gnncagtgta 480  
 aaccttntga atgcatataa gaagctgcn tggactatt accgnttggg ngtgtcctga 540  
 tcggnntnaag ggaggctgtn taaagcgng g 571

<210> 621  
 <211> 581  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(581)  
 <223> n = A,T,C or G

<400> 621  
 acattcgccc tgagggccag gacagtgtt tctcctggac ggacctgctg ctgaagaata 60  
 attctgagct gcttaacaac ctgggcaact tcatcaacag agctgggatg tttgtgtcta 120  
 agttcttttg gggctatgtg cctgagatgg tgctcaccce tgatgatcag cgctgctgg 180  
 cccatgtcac cctggagctc cagcactatc accagctact tgagaagggt cggatccggg 240  
 atgccttgcg cagtatctc accatatctc gacatggcaa ccaatatatt caggtgaatg 300  
 agccctggaa gcgattaaa ggcagtggag ctgacaggca acgggcagga acagtgactg 360  
 gcttggcagt gaatatagct gccttgctct ctgcatgctt caccttacat gcccacggta 420  
 gtgccaatc agccactgc actccactca gctgagtatc ngntgacaac ttctgngacc 480  
 ttggccggac acctaaggca atcaccatgg cgcgtctang gaccactcga ccacttgcca 540  
 acatggcnat ggtctgngaa tgnccgtaat tcncanntc a 581

<210> 622  
 <211> 644  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(644)  
 <223> n = A,T,C or G

<400> 622  
 actgtttacc agatcttttc agatgagggtg cttggttcag gccagtttgg catcgtttat 60  
 ggagaatttg caccatcctg ggattgtaaa cctggaatgt atgtttgaaa cccagaacg 120

agtcctttgta	gtaatggaaa	agctgcatgg	agatatgttg	gaaatgattc	tatccagtga	180
gaaaagtcgg	cttcagaacg	aattactaaa	ttcatgggtca	cacagatact	tggtgctttg	240
aggaatctgc	atthtaagaa	tattgtgcac	tgtgatttaa	agccagaaaa	tggtgctgctt	300
gcacacagcag	agccatttcc	tcagggtgaag	ctgtgtgact	ttggatttgc	acgcatcatt	360
gggtgaaaagt	cattcaggag	atctgtggta	ggaacttcag	catacttacc	cctgaagtcc	420
ttcngagcca	angtacaacc	gntccctana	tatgtggnc	gtgggagtta	tcatctatgt	480
gagcctnaat	ggcacatttc	ctttaatgng	gatgaagatt	taatgnccaa	tccaaaaaggc	540
tggtanttatg	naccctnggc	cgacccctt	anggggaatt	ccannnnntt	ggggggccgt	600
tctaaggggn	nccancttgg	gcccacntg	ggggaancat	ggcn		644

<210> 623  
 <211> 662  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(662)  
 <223> n = A,T,C or G

<400> 623						
acaaagagct	actccataaa	ttacatcttg	ccaagggtggg	agattgcatg	ggagactccg	60
gtgacaaaacc	cttaaggcgc	aataatagct	atacttccta	taccatggca	atatgtggca	120
tgccctctgga	ttcattccgt	gccaaagaag	gtgaacagaa	gggcgaagaa	atggagaagc	180
tgacatggcc	taatgcgga	tccaagaagc	gaattcgaat	ggacagttac	accagttact	240
gcaatgctgt	gtctgacctt	cactcagcat	ctgagataga	catgagtgtc	aaggcagaga	300
tggtgtctagg	tgacagaaaa	ggaaagtaat	gggctctcta	gaagaatggg	atgaccagga	360
taagcctgaa	gtctctctcc	tctttcagtt	cctgcaganc	cttacagcct	gctttgggtc	420
attcgcccat	ggtggcaatg	acgtaagcca	tgccatttgg	gcctctgggt	gctttatatt	480
tggtgttatga	cccnngagan	gttcttcaaa	agtggcaaca	ccaatatggg	nttctactct	540
antgnggggg	ggtgggatct	gnggttggtc	tgtgggggtt	ggggaaaaaa	aagttttccc	600
naccttgggg	aaaggatttg	ccnccgttac	accctttaag	ggtttngtat	ttgactngna	660
tn						662

<210> 624  
 <211> 682  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(682)  
 <223> n = A,T,C or G

<400> 624						
acaccaagca	tgggactttg	aaataaccaga	cagactgtgc	ccctaataat	ggttacttta	60
tgatcccttt	gtatgataag	ggggatttca	ttctgaagat	tgagcctccc	ctagggtgga	120
gttttgagcc	gacgaccgtg	gagctccatg	tggatggagt	cagtgcacac	tgacacaaag	180
gtggggacat	caactttgtc	ttcactgggt	tctctgtgaa	tggcaagggtc	ctnagcaaaag	240
ggcagccctt	gggtcctgag	ggagttcang	tgtctctgag	aaacactggg	acccgaagca	300
aagatccagt	ncacagttac	acaqntgag	gaaagtttgc	atthttttaa	gttctgcttg	360
gagaatatna	aaatcctngt	actcatccaa	cctggggcgt	tgaaagaagc	aagcaccacn	420
gtnccntggt	accaactcca	atgccaatgn	cggncagtc	ccttcatagt	tgctggnnta	480



ccaatngtgg	tcttggcntn	tgtcccnaaa	ttgattnggn	gaagcccctt	gtaangggccc	540
taaagtttcn	tnntcntttt	cttctttant	ttcctnnang	aaggaanncc	ttgggttnca	600
ntggntnacc	tgngcctggg	gttccaancc	nnataccnan	nntcttgggg	tatttngcct	660
acccggtntc	nnaaaaanat	gg				682

<210> 625  
 <211> 502  
 <212> DNA  
 <213> Homo sapiens

<400> 625						
acatttcctt	gtagactctg	ttaatttctt	gcagctcctg	gttggttctg	gagcagatga	60
tctcaatgag	agagtcctcg	tcggttccca	gccccttcat	ggaagctttt	agctcagagg	120
cgtcatactg	agcaggtgtc	ttcaataggg	ccaaaatcac	cgtctccagg	tggccagata	180
aggctgactt	cagtgtgat	gcaagttcct	ttttggctct	tctctggtag	gcgaaggcaa	240
tatcctgtct	ctgtgcattg	ctgcggttgg	tcaaaatggt	gacaatgggtg	acctcatcca	300
cacctttggg	cttgatggct	gtttcaatgt	tcaaagcatc	ccgctcagca	tcaaagttag	360
tataggtttt	gacagacca	tatgcacttg	gggggtgtag	aagtgatcac	cctccaagct	420
gagcttgcac	aggaatttcg	tgaacagtag	acattttgaa	ggaactgggc	ccgtgcgcgg	480
aagagctgaa	aaccgtccca	cc				502

<210> 626  
 <211> 935  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(935)  
 <223> n = A,T,C or G

<400> 626						
acattcatca	aagaggaatt	tgtcacccaa	ggccatgtgc	ttttcagtgg	aaaggaagga	60
gggaaacctc	taaggccgca	cgggtggccc	acggagctag	cacgtgggcg	ggactgaagg	120
ctagatgctg	ggattgaggt	ggggaactag	agatgactct	aaggcaggaa	catctgtacc	180
ttcggggccgc	ganccacgcc	taagggccga	aattcagcac	actggccggg	cccgttacct	240
aagtgggaat	cccgaagctt	cgggtaccca	aagccttttg	gccgtaaaat	caattgggtc	300
caattaagcc	ttggnttttc	ccttgggggg	tggnaaaaaat	ttgggtttta	ttcccggctt	360
tcaaccaa	ttttcccaac	canccaaacc	antttanccn	aaaaccccn	gggaaaaggc	420
cnttttaaaa	aggttgggta	aaaaaggnc	ccttnggggg	ggttngggcc	cttaaaattg	480
gaaanttttg	aaacccttna	aacnttnaa	nccattttta	aaattttggc	ccgttttggc	540
cggcctttta	aactttgggc	ccccnggttt	tttttcccaa	agttcccggg	ggaaaaaanc	600
cttgggtnc	nttgnccca	aacnttggc	cantttnaaa	ttggnaaatt	cnggggcn	660
aaacggcccc	ccgggggna	aaaaaaggcc	cnggggtttg	gccggtaant	tnggggcccc	720
cttttttttc	ccggcttttc	cctttgggtt	tnaacttgga	acttcnnttt	tgggncnttg	780
gggncntttt	cgggtttttn	cggncaaaa	cggggatntc	aagntttanc	ttcaaaaggg	840
ccgggaaata	ncnggttttt	ccccngaaa	tccggggggn	aaacccccgg	gaaaaaacct	900
ttttggacca	aaaggccnc	naaangggcc	ggaan			935

<210> 627  
 <211> 680  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(680)  
 <223> n = A,T,C or G

<400> 627

ggtaccacaa	ctcccaggat	tttcctggat	caaaccctgt	atctcttctg	caagtattgt	60
gtatattggt	ctgagagacg	tggaccctcc	tgaacatttt	attttaaaga	actatgatat	120
ccagtatttt	tccatgagag	atattgatcg	acttggtatc	cagaaggtca	tggaaacgaac	180
atttgatctg	ctgattggca	agagacaaag	accaatccat	ttgagttttg	atattgatgc	240
atttgaccct	acactgactc	cagccacagg	aactcctgtt	gtcgggggac	taacctatcg	300
agaaggcatg	tatattgctg	aggaaataca	caatacaggg	ttgctatcag	cactggatct	360
tggtgaaaagt	caatcctnag	ttggccacct	nagaggaaga	ngccaagact	acagctaacc	420
tggcagtaga	tgnngantgct	tcaagctttt	gggcagacca	ganaaaggan	ggcntattgg	480
ctattgaccc	acttttctant	tccaagttan	cccgaaggaa	tccgaaaatc	nagcccctgt	540
gganaaaattt	tggggaaact	tggcncctgn	ctggtttacc	aacaggggct	ttcccnaaat	600
ttttanggcc	tttnnggggn	ttnanngaaa	ccctaaaggg	gtnnnctggg	gccaaaaccg	660
gccttaanng	ggnaaacttt					680

<210> 628  
 <211> 637  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(637)  
 <223> n = A,T,C or G

<400> 628

acttgtaggg	tggagggtgc	ggtcaaagac	cttctttatg	atatcaagaa	atagacatgt	60
aacaaccatg	aggattatgg	caaaccaagc	agaaccactt	gacaggagct	gaataaacac	120
aaaatacata	ttctggggagc	ccaaaaatgg	ccagagaatc	cctccataaa	acaaggaaaa	180
tacaaaataa	aatataatag	atccccaggt	aacgagatgg	ttgatccaag	tccaaaaatg	240
agtttccaga	gccatcttta	ctgtgactgt	aataaccatg	actgtgaaga	ccaaagtgcc	300
aatgtccag	tttccaaaca	tctggcattt	ccaagcagag	atgtatcttt	ccctattagt	360
aaataggatc	naaaaagaaa	ataaaggcat	gactgaaccc	aggatggtcc	aataaagaaa	420
tggtttaata	cttaagaagg	cggttttact	aatggctcga	taaagggtggc	ttaatttggn	480
acacatgaag	gnctacatgc	ttgttccaaa	agactntttt	tcnnaattgg	tngggaagta	540
aaccaatttt	ggttaaagtc	agggnccttg	gccggaccen	cttanggcga	attccnnccn	600
ctggggggccg	tcttaggcga	ncaacttggg	cccaact			637

<210> 629  
 <211> 446  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(446)  
 <223> n = A,T,C or G

<400> 629  
 acttctcatg tccatgggta atgaaaggca gccatttgtt ttgcgctgtg ctgttctcta 60  
 ttgtttccag tgtttcttgt ataaaaacca aaaaggacaa ggagaaatcg tgtcaacact 120  
 tttaccttct accattgatg caacaggtaa ttcagtttca gctggccagt tattatgtgg 180  
 aggtttgttt tctactgatt cactttcaaa ctggtgtgct gctgtggccc ttgcccattgc 240  
 gttgcaagaa aatgccaccc agaaagaaca gttgctcagg gttcaacttg ctacaagtat 300  
 tggcaaccct ncagtttctt tacttcaaca gtgcaccaat attctttcac agggtgataa 360  
 agatcgacag acgggggaaac naaataacnaa ccaagaagtg gattattaat ggtgctttgg 420  
 accttggncc ngancacctt anggcc 446

<210> 630  
 <211> 635  
 <212> DNA  
 <213> Homo sapiens  
 <220>  
 <221> misc\_feature  
 <222> (1)...(635)  
 <223> n = A,T,C or G

<400> 630  
 actagatatt gtgcctgcaa gtcataaaaa aaaaaaaaaa aaaagaaaaa aatgaaagaa 60  
 tgcctttccc cttcagacaa aagaattact tttttcattt ttcttaaaaa aagaggaaaa 120  
 gttataaacac gaaacctaaa ttgacttgca aaggaatacc atgtaacaaa tggcttgaag 180  
 tagtctatca aaaaattggg gagattttta tttaatagt agtcagcaag gcattttttg 240  
 ttgtttaaaa aaaatctcat ttccttacag aaacagtttt tagtttttaa tgaacttgta 300  
 aacnaaaaag ctcccatctt aaaataaaaa cnaaatccca gatcatatta atgnttacng 360  
 ggggtacctt tatctaagca acatacntac ctgttcagtt gtaaganggt aactaaattt 420  
 ctngnaccaa natgcntttt ttttaatacc cngaacnttn ttgaggtaat gcnaaatcct 480  
 aangggaaac tagnngnccc taagntttct taagcnttcc tttaaaagcn ggggaattnta 540  
 gccccattaa ccggccnagn tttntatgc ctaaancttg gaantttggn gntnccatta 600  
 atgggttgna acaaaanccc cnttttnaaa ngtttn 635

<210> 631  
 <211> 694  
 <212> DNA  
 <213> Homo sapiens  
 <220>  
 <221> misc\_feature  
 <222> (1)...(694)  
 <223> n = A,T,C or G

<400> 631  
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 gaaagccatt ttctgattga aaattcaact aaagaagaac gaagtttgga aacagaaata 180  
 acaaatggaa tcaatctaaa ttcagatact gcagagcatc ctggcacacg cctgcaaact 240  
 cacagaaaaa ccgctcggtta cacctttaga tatgaaccgc tttcagagta aagctttccg 300  
 tgctgnggct nacaacatgc cagacaggtc gcaacctccc agcagtagga caaccacttn 360  
 agaaggagcc ctcggtacac ctggatacac cattcaaaat tctgntccan ggccaactct 420  
 ttaagccttt ctttgatgtg aaagatgccc tttcagnctt tggnaacttc cagaacgttc 480  
 caanccacn gaaaaagggg aaccgggtan ccttngccgg gaacccccct taaggggcga 540

aattccannn	cacttggggg	gnccgttnc	aaaggggatc	ccaaacttng	ggncccaaan	600
nttgggggga	aancangggg	ccanaaanng	gntcccctgg	gggnaaaaat	ggntatnccg	660
gttcnaaaan	ttcccccccn	aanatttngg	ggcn			694

<210> 632  
 <211> 252  
 <212> DNA  
 <213> Homo sapiens

<400> 632						
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ggtgatgggc	ttgccggtaa	gggttttcac	gaagatctgc	attttgacct	gttagcggat	180
accaggatcc	tgccaatcac	caaccacgtc	caccacagg	gacacaaaca	agctcaccca	240
acaaagccaa	cc					252

<210> 633  
 <211> 631  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(631)  
 <223> n = A,T,C or G

<400> 633						
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gggaacaata	ggaagaagaa	tgagcgtcaa	ttttcatgtc	ttcctttgct	tcttcactgg	180
ccttccatag	aagtagtcag	aaaaaaacaa	agcaccatca	accacacttc	acaaacaatt	240
catgttggcc	taagctttgc	tcaacattca	tatgacagaa	gatagaataa	tgaaaaggaa	300
ctgctggcat	cactttcccc	ataatattac	ataaaaaatg	acagcacatt	aaataaacat	360
tctgntatta	atcattaaat	atattaacac	caaaaaatcat	gtataaaatt	aggaaataaa	420
tgtcctgccc	ggccggnccg	tcaaggccaa	atncagncac	tgccggggcg	tctagtggat	480
ccnactcgga	ccaacttggc	gtaacatngn	catactgggt	cctgggggaa	atggtaatcc	540
nttacaantc	ncacactnac	anccggaanc	taaggggtaa	acttgggtgc	ctaagaggng	600
nctacntnca	ttaatgngtg	gcncttggc	c			631

<210> 634  
 <211> 561  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(561)  
 <223> n = A,T,C or G

<400> 634						
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acgtggtaga	gactggggag	taacacagtg	aaagtgggga	gcttgggtgg	gatccctggg	180

atccttgaaa	tgactggggc	tgaaatgtgg	gcgtgggttg	agagtagctg	ggacagacag	240
gaggggttgt	aagggctggg	ggtgaagacg	tgagagagac	tggcgaggat	ctcactgagg	300
tctctgactt	tctaggtgtt	tctgggggtgt	gggagacata	caacagctga	aaactggaca	360
tagttggaca	gcaactgggac	agaaaaggaga	tcgtgatggg	tggggggtgac	tgtctattgt	420
gccaacagan	taccaaagt	atatcagacc	gtttgctttc	nttgaatggc	ctctggctnt	480
caaaagcgna	tggtangaca	ctcagagtat	tctnctaagc	nttgataata	cactgnttat	540
nctgcntgtg	tctanctgcn	c				561

&lt;210&gt; 635

&lt;211&gt; 630

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (630)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 635

accgaggctg	ctaaagctgc	cagtcacaac	ccagcatgtc	aactgggttc	tcagtctctg	60
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ccaataacag	ctgataaaat	attttgcagg	tttgtcatgc	aagggtttat	tattaggtgg	180
ctattcaaag	tttgtatagc	aaccacttaa	gcagaactaa	attaatattc	actgagcact	240
gtaacgatgg	aagagggctt	ttcctaaggg	ttgggttggg	agttgtgctt	ctgtgaaatt	300
aacatctctc	actcattgcc	aagattctct	gcttaaaaaat	attagttttc	tgtgctgggtg	360
ccaaaatagc	aattttaagcn	aatgtagtgc	cagaatgaca	catgaacctn	ggactnaggg	420
aacagttnc	tgctgnngag	taccttgggg	gngaacacgc	ttanggcgaa	ttccacacac	480
tgcggggcgt	ctaanggatc	caactnggna	ccancttggc	gaatcatggc	atactggttc	540
ctgggggaaa	tggtatccgt	tacaatcncn	cacntaccag	ccggaacct	annngnaaac	600
tgggggccta	atggngacta	cntcattant				630

&lt;210&gt; 636

&lt;211&gt; 640

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (640)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 636

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ggggaatgag	cccagagaac	agcgaagtag	cttgctccct	gtgtccacct	gtgggtgtag	120
ccaggtatgg	ctctgcaccc	ctctgccctc	attactgggc	cttagtgggc	cagggctgcc	180
ctgagaagct	gctccaggcc	tgcagcagga	gtgggtgcaga	cagaagtctc	ctcaattttt	240
gtctcagaag	tgaaaatctt	ggaaaccctg	caaacagaac	agggcatgt	ttgcaggggt	300
gacggccctc	atctatgagg	aaagggtttt	gatcttgaat	gtggtctcag	gatatcctta	360
tcagancctta	nggtgggtgc	tcanaataag	gcangcattt	gangaaaaat	cttgggttct	420
ctttacagtg	cccacttctt	acacaccctt	gaggcaagga	atgcttgctt	acaagtacct	480
tgggcgggaa	cacgcttang	gccaaattca	acacacttgc	cggccgtact	aaagggatcc	540
ancttnggan	ccaacttggg	ggaaacatgg	cnaaatgggt	ccntggggaa	atgnaatccg	600
ttcaattccc	nnaantntca	accggaacct	taagggtaan			640

<210> 637  
 <211> 470  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (470)  
 <223> n = A,T,C or G

<400> 637  
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 atttagccta cataaaagac actcaataaa tagctggtaa aataacaaat gaataaatac 120  
 atatcatcaa ggggttgggggt cagtagacag cagtgcccaa gctggcatcc gtcaggaagt 180  
 gtgggccttt gtgtttttgat gctacacatg tctatggagg gccacttctt ctgtaagtct 240  
 gtggggcctc agcataccca ataggcagca agtttcagta tttcccagtt gtatgtcctc 300  
 atgggtggggc tatgtctccc ccaccacgtc ccctctcatc aggctagact ttaacatcca 360  
 tcaatcatgt cttgagtctt gctccttctt cttggcttan tcatgtgact acngatcaan 420  
 atcntggcct aatggtttta gtgtncang taccttnggc cgggcccacg 470

<210> 638  
 <211> 391  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (391)  
 <223> n = A,T,C or G

<400> 638  
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 tagggagacg ctcatatcat ggctgcaagc tcagatgctg aatccccaac cagagaagac 120  
 ctttatacga aataaagccg cccaagtctt cgccttgctt tttgttacag agtatctcac 180  
 taagtggccc aagttttttt ttgacattct ctcagtagtg gacctaaatc caaggggagt 240  
 agatctctac ctgcgaatcc tcatggctat tgattcagag ttggtggatc gtgatgtggt 300  
 gcatacatca gaggaggctc gtaggaatac tctcataaaa gataccatga gggaacagtg 360  
 cattccaaat ctggtggaat catggnacct n 391

<210> 639  
 <211> 329  
 <212> DNA  
 <213> Homo sapiens

<400> 639  
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 gtgatattta taaaacaagg ggtggtggac aatctgttca gtttactgat attgagactt 120  
 taaagcaaga atcaccaaat ggtagtcgaa aacgaagatc ttccacagta gcacctgccc 180  
 aaccagatgg tgcagagtct gaatggaccg atgtagaaac aagggtgttct gtggctgtgg 240  
 agatgagagc aggatcccag ctgggacctg gatatcagca tcacgcacaa cccaagcaca 300  
 aaaagccatg aactgacagt cccagtacc 329

<210> 640  
 <211> 764  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (764)  
 <223> n = A,T,C or G

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<400> 640
gcgccgagg tacttcacca tcaactgactc catggacttg atcagccgcc gctggatgta      60
tccagtctca gcagtcttga cagccgtgtc aatgagcccc tcacgacccc ccattggcgtg      120
gaaaaagaac tcagtgggtg tgaggccggc taggtaggag ttctccacaa agccacggct      180
ctcaggcccc tagtcatcct tgatgaagtg aggcagagtc cgggtgcttga agccaaatgg      240
aatccgcttg ccctcgacgt tctgctgtcc aacgacagcg atgacctggg agatgttaat      300
cttggaacct ttagctccgg acacgacatc agacttgaag ttgttgnatt cagacagggg      360
tttctgaagc agaaggaacc agtcttggct tgggcattcg gtaanaatgc gggtcacctg      420
aatcttcaaa acgtctggnc cgcaaaatgg ttcccctggg gggtggggct tccancntta      480
attgggtggg gngccctttn ttggaaggaa ccctctaatt aacggtcctt ggctttgggc      540
ctttccttaa ataaggggtg ctngnaaagg gccctngggg aaaggncttt aaaaaaatcc      600
nccaatnggg agnnccccc aaangcccca atnngtnttg gancctttta aanncccggg      660
ggaaaaaacc ttttngncaa aaacccccc ttgggggccc ttttaanaaa aacccttggg      720
aatgggggaa tttnttnncc cccaaaanag gtttnaaaac ccgg                        764

```

<210> 641  
 <211> 540  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (540)  
 <223> n = A,T,C or G

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<400> 641
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ggaaggaatt tttaatctta tgtgatttta attggcttaa ctttaaacag ccgcatgtgg      120
ttactgtatt ggatagcaca gccctagagc ctgaagaaag caaaccaaag aacaccagct      180
gggtcccaaa cagaaggcag aaagggtaga accatccacc tcaactattc cagccccatc      240
agaaggcacc aggaacaggg caagagaaaa aggcacaaaac ccaccagcc catgaaaatt      300
cactcctcaa ccaccagca catcaaactg gaacaccaca ctatttcctg aaaaaatata      360
ttattatttt ctagaccaag gagatatata tatatagaac cagcacaatt ccacatcctc      420
atatatttgg actgtaaaaa acttggtcgc aantttttta agacantnaa ggcagctagc      480
gggtaagtaa aaactgggag gtatgaaaca gagaaggaga gctttantta tnaaaaaaaaa      540

```

<210> 642  
 <211> 608  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

&lt;222&gt; (1)...(608)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 642

ggtactagt	agaagaggga	atatgcattg	cagttcagca	aagccggaat	tctgtgttga	60
acagatgtct	gtctccctag	tgtgtgactc	acaccttgtg	gctgccttca	gagcgccacc	120
tccagatcag	atggggacac	acaacccctg	gatatgtttc	attgtcagat	tttgtgcttg	180
attttaagaa	tgggaattgtg	ggatatcttc	ctttttttta	atgtatctta	actgttgctt	240
gtcagtgttt	acaaactagt	gcgttgacgg	caccgtgtcc	aagttttttag	aacccttggt	300
agccagaccg	aggtgtcctg	gtcaccgttt	caccatcatg	ctttgatgtt	cccctgtctt	360
tccctcttct	gctctcaaga	caaagggttaa	ttaaggacna	agatgaagtc	actgtaaact	420
aatctggcat	tggttttttac	cttccttttc	tttttcagtg	cagaaaatta	aaagttangt	480
attaaagcac	ccgtaaaaaa	aaataactnt	antacaaaana	aaagcttgtt	caagctttnt	540
ttttttntnn	tttttttttt	ttatttcccc	ggncaaaaaa	gtttttttnan	tcaaaantcaa	600
gggttnan						608

&lt;210&gt; 643

&lt;211&gt; 669

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(669)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 643

acagagtcac	ttacatagat	tatgttgtgc	tttgtgttta	ttctccacac	tttcagtcca	60
tattctgtcc	tgtatatgtt	tcccattttt	ccaggcattt	tagttccagg	ccagactctg	120
ccaatatcac	cagttgcaac	agctccagggt	ctcctgtggg	ttttcgtttg	accatgcgta	180
gcaggctggc	ctttaaatcc	ccatcttttc	atgacacctt	gaaaaccttt	accaatagtt	240
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ccaagttccc	ggtaaaattc	caatatggat	gtagctttac	gaaaacgtga	tcagggttttc	420
cttctacaga	cagggttgcc	atttttcatt	acaggtttcc	ttttgacgta	tattttaaga	480
catgacagtc	ttgnacacta	gaattatggt	ttaagtttcc	tttggnatta	agagatatat	540
aaccctttca	aaacaatctg	gtccttaaaa	aatntcaata	atggaatgaa	ttttcttaaa	600
aaaggggaga	atccaccnnt	gcacctgctt	tggntttaan	aaaatatggg	taaacattta	660
cttcctntnn						669

&lt;210&gt; 644

&lt;211&gt; 572

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(572)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 644

acaagctttt	tttttttttt	tttttttttt	tttttttttc	atattcacta	nttgngacat	60
ntaactgctc	aangatttct	tgaatacgtt	tttcaatttg	ancctngtca	ccttttcctt	120



ttaanagcat	ggcatcgctt	ttggncacaa	ngacctntcc	aacttttccct	aagtcattgag	180
gctgaacgct	ttcaanattc	aggggtcaatc	cctntttctcc	aaacacctac	aaaaagagtt	240
aaacgtaaaac	ctgtttgtagg	ttacagtttn	tgccattata	ccaagttnat	taatacncca	300
tgcaananaa	tcatcaaaat	actttatttc	tttgaaatga	gagattttta	natcactggt	360
agtcanaaac	aagacttgag	tatagtctnt	ttcactgnat	ttccaaattc	tcaattttca	420
caactggggt	aattattacc	agcmttactt	gnnaaaaaaa	cnttcnaagg	tcacacttac	480
tgggaanagc	caggacaana	ncataggccn	ttgactntta	agtcctanaa	tcctttggna	540
catacncttt	tacctttnaa	actgnggctt	gg			572

&lt;210&gt; 645

&lt;211&gt; 690

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(690)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 645

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tgcaagcgaa	tcagggtcgt	gggagaggcc	ctatgtattc	cggattcccc	gggcttgctc	180
taattcttgt	cgtctctgct	gcaccttgga	gtagaagtat	cggcacacag	cctcctgagc	240
ccagggtcgg	aagtagaact	cagctcgggc	ctcctcctct	gggtttaccca	ccacatcagt	300
cattgtcttg	aggtccctgc	actgggactg	aagccagtca	ttgatgaaac	cctgagggtc	360
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aaaaagaaat	catcttgggg	ctttcaagg	ggcattcact	ttnaccatca	atggcataac	540
aagctggcct	ttttctnaac	attcgggtca	acactgatga	cattgaataa	nganaatagg	600
ttntggnggc	attaaccang	natggaaccn	cttagggact	ttgaaactta	tcnntgagac	660
ttaananntn	tgnggacctt	gccgaacncg				690

&lt;210&gt; 646

&lt;211&gt; 770

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(770)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 646

cgaggtacat	tccgctcacg	gatctcagct	tccagatggg	ggatgaactg	gaggcagtg	60
ccaacatccc	cctggtgccc	gatgaggagc	tggacgcttt	gaagatcaag	atctcccaga	120
tcaagagtga	catccagaga	gagaagaggg	cgaacaaggg	cagcaaggct	acggagaggc	180
tgaagaagaa	gctgtcggag	caggagtca	tgctgtcgt	tatgtctccc	agcatggcct	240
tcagggtgca	cagccgcaac	ggcaagagtt	acacgttcct	gatctcctct	gactatgagc	300
gtgcagagtg	gaggggagaa	catccgggag	cagcaagaaa	gaagtgtttc	anaaagcttt	360
ctcccttgac	atcccgtgga	gcttgcanaa	tgcttgaccc	aacttcgtgt	tggtggaaac	420
ttccagaact	tgtncacaag	catttcccgc	ttgaccatt	caatttaagg	gaagaatgaa	480
tgaagtcttc	cnggggcttt	ttattggggt	tttctggaat	gggtcattcan	tccacttnaa	540

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gcccnccttg	gaatttnaag	cccgaggttt	caaaatcttg	tanccttggc	ccngggccgg	600
gccggttcca	aaggggcgaa	atttccagcn	cacttgggng	ggccggtact	tannggggat	660
cccaacttcg	gnncccaacc	ttggnggnaa	ancatngggc	ctanctnggt	tccncgggng	720
gaaaatggta	ttnccggtcc	aatttccccc	cannttttna	accggagctt		770

<210> 647  
 <211> 454  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(454)  
 <223> n = A,T,C or G

<400> 647						
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ggcagacggc	tatcattcgg	ttgtcctgga	aaactgctgc	tatctcccgg	cggagaagcc	180
tgatgaggcc	tatctcctcc	tgtggggggc	tgggagg ja	tggcacgtat	cttccaagta	240
tgttctgaaa	attaaacagg	gtaacctatt	tttgatgtta	tttcaaactg	ctatattcat	300
ctatgtctag	ttaaaaacaa	tttttggttt	attcacttac	ataatgttct	tatagtata	360
ttttttccac	ttattccana	agtgttaggt	gattattcta	cacttcttgn	gcccattcta	420
tggagaataa	agatgggtcc	nggccgcgac	cacc			454

<210> 648  
 <211> 532  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(532)  
 <223> n = A,T,C or G

<400> 648						
ggtacatgtg	ggagaaaaac	ttaagtgtga	tgagtgtggt	aaggaattca	gtcagggcgc	60
tcattctacag	acccatcaga	aagtccacgt	gatagagaaa	ccatacaaat	gtaagcaatg	120
tgggaaaggt	ttcagtcgta	gatcagcact	taatgttcat	tgcaagggtcc	acacggcaga	180
gaaaccttat	aattgtgagg	agtgtgggag	ggccttcagt	caggcctctc	atcttcagga	240
ccatcagaga	ctccacactg	gggagaagcc	attcaaatgt	gatgcatgtg	gtaagagctt	300
cagtcggaat	tcacatcttc	aatcccatca	aagagttcat	acaggagaga	aaccatacaa	360
atgtgaggag	tgttgtaagg	gcttcatttg	tagctcaaat	ctttacattc	atcagagagt	420
ccacacagga	gaaaaaccct	ataaatgtga	ggaatgtggt	aaaggcttta	gtcggnccttc	480
aagtcttcag	gcccatcagg	gagttcacac	tggagagaag	tcatacatat	gt	532

<210> 649  
 <211> 493  
 <212> DNA  
 <213> Homo sapiens

<400> 649						
ggtacaaaaat	tgttggaatt	tagctaatag	aaaaacatag	taaatattta	caaaaacggt	60

gataacatta	ctcaagtcac	acacatataa	caatgtagac	aggtcttaac	aaagtttaca	120
aattgaaatt	atggagattt	cccaaaatga	atctaatagc	tcattgctga	gcatgggttat	180
caatataaca	tttaagatct	tggatcaaat	gttggtccccg	agtcttctgc	aatccagtcc	240
tcttagaaat	tgggttctct	ctttgggaga	ttcagactca	gagggcagcca	gaggggacag	300
gtcaagagct	gaaataatca	cataactact	ctaattttct	tcattctatt	gactgtgtca	360
agttatagac	acagccaaag	tgtttttctt	ctgcctctga	tgatttgaga	agatgaagaa	420
catgagcaat	ttctcattgc	ttaaagaaaa	acttggcaca	taagaggctg	agtgtagtag	480
agtatctgtc	ctg					493

<210> 650  
 <211> 693  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (693)  
 <223> n = A,T,C or G

<400> 650						
gagacttttg	atccttcctg	aggacgtgga	gaaaacttgc	tgctgagaag	gacattttga	60
aggtttttgtt	ggctgaaaaa	gctgtttctg	gaatcacccc	tagatctttc	ttgaagactt	120
gaattagatt	acagcgatgg	ggacacagaa	ggtcacccca	gctctgatat	ttgccatcac	180
agttgctaca	atcggctctt	tccaatttgg	ctacaacact	ggggtcatca	atgctcctga	240
gaagatcata	aaggaattta	tcaataaaac	tttgacggac	aagggaaatg	ccccaccctc	300
tgagggtgctg	ctcacgtctc	tctggncctt	ggctgtggcc	atattttccc	nccgggggat	360
gaacggnntc	tttttccgcg	gactctttcg	caaccnnttt	ggcaggcccc	attcaatgct	420
gaatggcaac	ctggtnngctg	cactggtggc	tgctttattg	ggactgggtn	aaggaactta	480
ntccggttgn	aatgcttgat	nccgggnccc	ttnggtaatt	gggcnttttn	tgnggactnt	540
tggncaaggt	ttgggnccca	tgtanccttg	ggccggnaac	acccttangg	gcnaanttcc	600
gcncacttgg	cggggccgta	ctanagggaa	tcccaacttg	gnacccaacn	ttggggnaaa	660
catnggcana	actggttccc	ggggggaaaa	tgg			693

<210> 651  
 <211> 678  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (678)  
 <223> n = A,T,C or G

<400> 651						
ggtacgaagt	ttgttaccac	agtagagata	atttagtaga	aaaatgcttt	gaggcttcag	60
tatttgtaag	attttgcatt	agccagatgc	taggttggtg	aaggcatttc	agtgttgata	120
ataacctgag	cagacttctt	tacaaatggg	atctgtttct	atatgtgtat	atgccactt	180
accattcaga	gagactggtc	tttctctttg	tcttccttca	cattgctgtg	tcagttctac	240
acctagtctt	ttcagcactt	agcaaattca	aatttttgatt	tttttgtcag	cttagttcac	300
tttaaggcat	attggcatgg	tgtgtgaaag	tgatgttttg	ccccagtatt	gaggactttt	360
agatccnaat	aatgactcat	taaatataat	tatgttttaa	gtataacctga	atttctggta	420
gcttaaaaatg	ttaattctca	ggaatgattt	tctcacactt	ttgggggtggc	taataataaa	480
agcactgggtt	tatttctcaa	actccttttt	tcaaaattag	ggagagagcn	naagtggaca	540

ttttatgtga	acccctttgn	aaanatgggg	gntngantgc	ngagaaacca	atggagtttt	600
ngntgcnaaa	aggttttttc	ccgnaangta	aaattggaat	aantggcnat	tgaggaccct	660
tgnnctgccc	ggcggcnn					678

<210> 652  
 <211> 676  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(676)  
 <223> n = A,T,C or G

<400> 652						
ggtacaagct	tttttttttt	tttttttttt	tttttttgtg	tttaaagtca	ttttattttt	60
agacaaccta	catgacatgt	ttttcttaaa	aacaatgcct	ccactccaaa	taaatcacag	120
tcaaaataaa	tgaagagctc	aagatgacat	cagtcccat	tgtcttaagt	cctgggtgtg	180
tgtggatgac	aagcagaagc	cagttatgat	gacaggtgat	agatccaaaa	taattgccac	240
atttgtaaac	atttttccat	ttctaaacca	tccttaaaga	aaatcatata	tggggtcaca	300
ccatcctcac	ggtagtccaa	tagagcaacc	atgccatctg	gattcatgtt	ttcaccaata	360
aagaactggg	aagtttttga	aattagcaag	ggatgtgctt	gatttgttct	gcaacccctg	420
gcataaaaag	gtttactctt	tctnggctct	ggctctttaag	gttncctttg	aatggattca	480
tgtaaccctt	gatgtaccct	ggcccggccg	gccaagggac	ntgtaaaagn	gccccaatcc	540
acccganaan	aaataagggg	tttnttccgc	gnttanganc	tcctttggac	cttttttaan	600
cttgccctgn	ggaaattaat	ctggccnttt	acctnggana	atagaaaata	ntttttcccg	660
naaccttgaa	cttcnn					676

<210> 653  
 <211> 468  
 <212> DNA  
 <213> Homo sapiens

<400> 653						
tcgagcgcc	ccgggcaggt	actccagcat	tggttatagt	catgggaaag	gaagggtgtcc	60
acggaggcac	acttaacaag	aaagcatatg	aactcgcttt	atacctgagg	aggtctgatg	120
tgtaagcagc	ctctcccat	ctacctagca	actgtcttca	tcaacaaccc	taattatggg	180
cacaatgcta	ccaaactgta	gatggtagct	aatttttctt	tacctatttt	ctaattgtcat	240
gattcctgtt	tgcccaatgg	atcatttgta	tgtaaacac	tgtatgtaac	caacccttat	300
ctggcaacat	aattgcagca	caataatgat	ttgcatgata	ccttgaaatt	gggggggaggg	360
ggcatgccaa	gttgggcatt	actttgtctt	agcaattaat	gggatattga	ttactaaaat	420
aagttaatat	taaacaaggt	gccggttgta	ccttggccgg	gaacacgc		468

<210> 654  
 <211> 612  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(612)  
 <223> n = A,T,C or G

```

<400> 654
actgaagagc ccatggatac tacttctgca gttatccatt cagaaaattt tcagacattg      60
cttgatgctg gtttaccaca gaaagttgct gaaaaactag atgaaattta cgttgcaggg      120
ctagttgcac atagtgtatt agatgaaaga gctattgaag cttaaaga attcaatgaa      180
gacggtgcat tggcagttct tcaacagttt aaagacagtg atctctctca tgttcagaac      240
aaaagtgcct ttttatgtgg agtcatgaag acttacaggc agagagaaaa acaagggacc      300
aaagtagcac attctagtaa aggaccagat gaggcaaaaa ttaaggcact cttggaaaga      360
acaggctaca cacttgatgt gaccactgga cagagggaagt atggaggacc accttcagat      420
tccgtttatt caggctcagca gccttctgtt ggcacctgag atatttgtgg ggaaagatcc      480
caagagatct atttgaggat gaacctggtn cantaatgtg agaaaacctn gacctatatg      540
gggatcntcg tctaattgat ggatcccttc actgggcttn aataaanggt ntgccgttgg      600
caantttttg nc                                     612

```

```

<210> 655
<211> 608
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(608)
<223> n = A,T,C or G

```

```

<400> 655
ggtactttgt cctggaggaa gggcacgact acacttcttc caaggggcag aacatgggtgt      60
gcggcggcat gggctgcaac aatgattccc tgggtgcagca gatattttaac gcggcgcagc      120
tggacaacta taccgaata ggcttcgccc cctcgtcctg gatcgacgat tatttcgact      180
gggtgaagcc acagtcgtct tgctgtcgag tggacaatat cactgaccag ttctgcaatg      240
cttcagtggg tgacctgcc tgcgttcgct gcaggcctct gactccggaa ggcaaacaga      300
ggcctcaggg gggagacttc atgagattcc tgcccatggt cctttcggat aaccctaacc      360
ccaagtgtgg caaaaggggg acatgctgcc tatagtctgc agttaacatc ctccctggcc      420
atggcaccag ggtcngaacc acgtactaca atgaanccac aggtggcaaa atgttcctcg      480
tgcttctgtg ggattaaact gggaccatgg ctgtcctag ncctttgcng ncttaaccaa      540
cacttgattg canttgggag taaatggcaa gcctccagag cncactgtnt tgctgaggac      600
tccgcgcc                                     608

```

```

<210> 656
<211> 659
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(659)
<223> n = A,T,C or G

```

```

<400> 656
accaaactga ccaatgggct gcaagaggtt tagattattg ctaccacaa aattctgagc      60
caaattgata atgggtcaaca ttagtgacat ctgcctatga tgataagaag acatttcagc      120
cactgatcca gctaattggg caacctttac ttctcgttgg tcattccgtt tgaagcaagt      180
aaacaaaacc tttctctgac ctggtttcaa accatccacc atagaagggga tagatctctc      240
gttatcagaa tttgagaaca agataagttc cttgttgatg aagtcattat atgtcagata      300
tgtggtagtt tgtccataca agtaatcctc aggaagccca agtaactttc gttgtcttct      360

```

atcctccatg	aaattagtta	accatttcctt	tcgatcatct	atctgttttt	tgctaaagge	420
caggctgata	gcagcatcat	cttcaggacc	agaatatattg	aactgggatac	gatgtctttt	480
catactctgca	aagtatcttt	acttcctttg	atgtgctggg	gcccacacct	ttgnaatatt	540
ggcttttcat	ttttatgatt	gggagtagaa	ctcttnact	cttcaaattc	aggaangctt	600
naaaatgcct	ttcttgcttg	gtttagancc	tttccatggg	agtgataaat	cctccgaaa	659

&lt;210&gt; 657

&lt;211&gt; 676

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(676)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 657

ggtacagaat	tatataattc	taacgcttaa	atcatgtgaa	aggggttctg	ctgtcagcct	60
tgcccactgt	gacttcaaac	ccaaggagga	actcttgatc	aagatgccc	accctgtgat	120
cagaacctcc	aaatactgcc	atgagaaact	agagggcagg	tcttcataaa	agccctttga	180
accccttcc	tgccctgtgt	taggagatag	ggatattggc	ccctcactgc	agctgccagc	240
acttggtcag	tcactctcag	ccatagcact	ttgttctactg	tcctgtgtca	gaacactgag	300
ctccaccctt	ttctgagaag	ttattacagc	cnagaaaagt	tgggctgaaa	aatgggtggg	360
ttcatgggtt	tggattaatg	gatctttttg	gatgggaaag	actataattt	gggacctcat	420
cttttccag	gatgaccag	aagctanaac	ctgctaaaag	gattcttggg	acntgaaggg	480
tattaatacn	aaccnntca	tggnggnatc	ctnggaacct	gccgggaaga	agcccnttgg	540
cccgtttaat	gcnccggtgc	tnaacaagtc	tgnttcttgn	ntttcacttc	ancttggggc	600
cctggaatca	nctggcnctg	gtgnncagtt	taactatgnc	ttgntggaac	ccctaaggcc	660
ttangcctta	ccaaag					676

&lt;210&gt; 658

&lt;211&gt; 646

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(646)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 658

ggtacaatgg	aacaaacaac	aagaacacac	ctgtctatgt	gtcctcacca	acctgggaga	60
atcacaatgc	tgtgttttcc	gctgctgggt	ttaaagacat	tcgggtcctat	cgctactggg	120
atgcagagaa	gagaggattg	gacctccagg	gcttcctgaa	tgatctggag	aatgctcctg	180
agttctccat	tgttgtcttc	cacgcctgtg	cacacaaccc	aactggaatt	gacccaactc	240
cgagcagtg	gaagcagatt	gcttctgtca	tgaagcaccg	gtttctgttc	cccttctttg	300
actcagccta	tcagggcttc	gcactctggaa	acctggagag	agatgcctgg	gccattcget	360
attttgtgtc	tgaagcttcg	agttcttctg	tgcccatcct	tctccaagaa	cttcggctct	420
acaatgagag	agtcnggaat	ctgactgntg	gttggaagaa	aacctgagaa	catcctgcaa	480
gtcctttcca	gatgagaaaa	tcgtgccgat	tacttggtcc	aatcccccg	ccaaggagcc	540
cnaattgtgg	ccagcacctt	tttaacctga	cttttgagga	tggcnggtat	ntgaaacatg	600
gtnaccgatc	tggcctgana	ctgactnngn	ncnntnaanc	ctaaan		646

<210> 659  
 <211> 673  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (673)  
 <223> n = A,T,C or G

<400> 659  
 actgtgtcca acagctgaag gaatttgagg ggaagacttt agtgtcagtc accaaagaag 60  
 gcctggaaact tccagaggat gaagaagaga aaaagaagca ggaagagaaa aaaacaaagt 120  
 ttgagaacct ctgcaaaatc atgaaagaca tattggagaa aaaagttgaa aaggtgggtg 180  
 tgtcaaacgg attggtgaca tctccatgct gtattgtcac aagcacatat ggctggacag 240  
 caaacatgga gcgaatcatg aaagctcaag ccctaagaga caactcaaca atgggttaca 300  
 tggcagcaaa gaaacacctg gagataaacc ctgaccattc cattattgag accttaaggc 360  
 aaaaggcaga ggctgataag aacgacaagt ctgtgaagga tctggtcac tctgtttatg 420  
 aaactgcgct cctgncttct ggcttcagtc tggaagatcc cagacacatg ctaacaggat 480  
 ctgagggatg atcaaacttg gtctgggtat tgatgaagat gaccctactg ntgatgatcc 540  
 catgcttgct gnaactgaag aaatgcccnc ccttgaa\_ga gataccaccc ctacgcctg 600  
 ggaanaagtn actaactttg gcttanggat nnttaccngt cagaccttgg ncggaacccc 660  
 ttagggcnaa tcc 673

<210> 660  
 <211> 580  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (580)  
 <223> n = A,T,C or G

<400> 660  
 acaaaacgcc acattctcac ttgtattggg agctgaaaaa tgggatcaca tggacgcagg 60  
 acggggaaca acacacactg gggcttttcg ggagacagag cgttaagaaa aacagctgat 120  
 gcatgctggg cttaataacct aggtgacggg ttgacagggtg cagcaaacca ccatggcact 180  
 cgtttacctt agtaacaaat atacacatcc tgcccatata cccagaaact tagaaacaga 240  
 acgaaacaaa agaaaacgag aaagcaatag caaatcgcta gcgggaaaac aaattttcaa 300  
 actcagaaaa tgacagacca atttttgctt caaatcatgg ttcttaaccc aggtgccata 360  
 aggtcaggat aaagaatttg attacatatt gtaaataaga catgcagcaa atgaccagaa 420  
 aaattattcc caacatatgt gtgtcttcga attcaatggg gacgctatct accgggacat 480  
 aacattagat tccaaagggc cgagtnncac aagactgncc tnccatacta ataacnatga 540  
 aagccctacg ttggggtttat ctgctttnt ancagctggg 580

<210> 661  
 <211> 710  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

&lt;222&gt; (1) ... (710)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 661

ggtacatata	aatgaatctg	gtgttgggga	aaccttcac	tgaacccac	agatgtctct	60
ggggcagatc	cccactgtcc	taccagttgc	cctagcccag	actctgagct	gctcaccgga	120
gtcattggga	aggaaaagt	gagaaatggc	aagtctagag	tctcagaaac	tcccctgggg	180
gtttcacctg	ggccctggag	gaattcagct	cagcttcttc	ctaggtccaa	gccccccaca	240
ccttttcccc	aaccacagag	aacaagagtt	tgttctgttc	tgggggacag	agaaggcgct	300
tcccaacttc	atactggcag	gagggtgagg	aggttcactg	agctcccag	atctcccact	360
gcggggagac	agaaacctgg	actctgcccc	acgctgtggc	cctggagggt	cccggttgnc	420
agttcttggt	gctctgtgtt	cccagaggca	agccggagg	ttgaaagaaa	ggaacctggg	480
atgaagggtg	gctgggtata	aaccagaaaa	gggatnggt	tcctgnttcc	aangggaccc	540
ctttggcctt	tcttctggcc	ttcctaagg	cccaggnetg	gggnttggn	ccttgggccg	600
ngaaccacgc	ttaagggccg	aaattccagc	acacttggcc	ggccggtacc	tagtgggatc	660
ccaactttgg	gtccaaactt	tggcgtaaat	catngggcct	aacttngttn		710

&lt;210&gt; 662

&lt;211&gt; 411

&lt;212&gt; DNA

&lt;213&gt; ..omo sapiens

&lt;400&gt; 662

ccaaaaatctg	gaatgttcat	agtgtcctca	atgtccttca	ttccctggta	gacaaatcca	60
acatcaaccg	acagttagg	gtatacacia	gaggaggtga	ccctgagagt	gtggctgggg	120
agtatgggcg	gcactccctc	tacaaaatgc	ttgggttactt	cagcctgggtc	gggcttctcc	180
gcctgcactc	cctgttagga	gattactacc	aggccatcaa	ggtgctggag	aacatcgaac	240
tgaacaagaa	gagtatgtat	tcccgtgtgc	cagagtgcc	ggtcaccaca	tactattatg	300
ttgggtttgc	atatttgatg	atgcgtcggt	accaggatgc	catccgggtc	ttcgccaaca	360
tcctcctcta	catccagagg	accaagagca	tgttccagag	gaccacgtac	c	411

&lt;210&gt; 663

&lt;211&gt; 633

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (633)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 663

ggtacttggt	tttaatgctc	gtcagcgaaa	agcctttctt	aatgcaatta	tgcgatatgg	60
tatgccacct	caggatgctt	ttactaccca	gtggcttgta	agagacctgc	gaggcaaatc	120
agagaaagag	ttcaaggcat	argtctctct	tttcatgcgg	catttatgtg	agccgggggc	180
agatggggct	gagacctttg	ctgatgggtg	ccccgagaa	ggcctgtctc	gccagcatgt	240
ccttactaga	attggtgtta	tgtctttgat	tgcgaagaag	gttcaggagt	ttgaacatgt	300
taatggggcg	tggagcatgc	ctgaactggc	tgaggtggag	gaaaacaaga	agatgtccca	360
gccagggtca	ccctcccca	aactcctaca	ccctccactc	caggggacac	gcagcccaac	420
actcctgcac	ctgtccacct	gctgaagatg	gataaaaatng	aaggaaaata	cctcaaagaa	480
ganagagctn	gaaggagaaa	aggaggttaa	actacagccc	tgaactgcc	tgatgactgc	540
cggcgggcgg	tcaaaggcna	cccaaccatn	gcgcgntna	atggntcaac	tnggaccant	600
tgcnaacatg	cnaacttgct	ctgggaaatg	nnc			633



<210> 664  
 <211> 598  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(598)  
 <223> n = A,T,C or G

<400> 664  
 gcgtggtgcg gcccagagta ctgggtccaa atgctggaga agttacacaa ggctttgcag 60  
 ctgcgctcaa atgtggactg accaaaaagc agctggacag cacaattgga atccaccctg 120  
 tctgtgcaga ggtattcaca acattgtctg tgaccaagcg ctctggggca agcatcctcc 180  
 aggtggtctg ctgaggttaa gcccagtggt ggatgctgtt gccaaagactg caaaccactg 240  
 gctcggtttcc gtgcccataat ccaaggcgaa gttttctaga gggttcttgg gctcttgga 300  
 cctgctgtc ctgtgcttac caccgccaag gccccttgg atctcttgg ataggagtgt 360  
 tgaatagaag cagcacatca cacttgggtc actgcagaac ttgaanttga cattggcagg 420  
 catcnaggat natccatgag tcaccagtct nagccatgtg taggcgtatg aactgcaaaa 480  
 tatttacata ccttctctggg attctatctc tggaagtttn ggtgattttc tttttcatgg 540  
 naanattaan taaactncat tatttgcaac anntgttaat cntcagggtg tctgaagg 598

<210> 665  
 <211> 658  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(658)  
 <223> n = A,T,C or G

<400> 665  
 acccaaaagc agtgcaggac ctctgcagct ggagaatctg gagcctggct tgtgggaaga 60  
 gcagcatcat tgtggcagcc gatgagagca ccatcagctg gggcccatca ccgacctttg 120  
 gggaactggg ctacagggat cacaagccca agtcttccac tgacagcccag gaggtgaaga 180  
 ctctgcatgg cattttctca gagccggtcg ccatgggcta ctcacactcc ttggtgatag 240  
 caagagatga aagtgaact gagaaagaaa agatcaagaa actgccagaa tacagccccc 300  
 aaacctctg atgctccaga gactcctccg actccacacc tctcatggca gctgcatttc 360  
 catgtgcact gggaccggaa agtcaaacna ggaatttaaa aaagccaaag tggacccaaa 420  
 ggtgcctttt tatttaaaact tcctganggt ncggtttacc agtgatccaa cggtnactac 480  
 ctttttttct ggttgctttt caaagaccct ttttttctct taatggccaa ataaaaaacc 540  
 tgnttcgaan tggcntaaca nttctaccaa gaggccnaaa ccttttacca ttaagggggg 600  
 tttttcttct tctntctgaa acccttncca aaaactcntt tccgtttaat nnntnngg 658

<210> 666  
 <211> 349  
 <212> DNA  
 <213> Homo sapiens

<400> 666  
 gcggcggcgg gggaagcagc gtgagcagcc ggaggatcgc ggagtcccaa tgaaacgggc 60

agccatggcc	ctccacagcc	cgcagtatat	ttttggagat	tttagccctg	atgaattcaa	120
tcaattcttt	gtgactcctc	gatcttcagt	tgagcttcct	ccatacagtg	gaacagttct	180
gtgtggcaca	caggctgtgg	ataaactacc	tgatggacaa	gaatatcaga	gaattgagtt	240
tggtgtcgat	gaagtcattg	aacccagtg	cactttgccg	agaaccccc	gctacagtat	300
ttcaagcaca	cttgaaccct	cagccccctg	atttattctc	ggttgtacc		349

<210> 667  
 <211> 768  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(768)  
 <223> n = A,T,C or G

<400> 667						
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agcgccggcc	actacgaact	gccgtgggtt	gaaaaatata	ggccagtaaa	gctgaatgaa	120
attgtcggga	atgaagacac	cgtgagcagg	ctagaggtct	tgcaaggga	aggaaatgtg	180
cccaacatca	tcattgcggg	ccctccagga	accggcaaga	ccacaagcat	tctgtgcttg	240
gccccggccc	tgctgggccc	agcactcaaa	gatgccatgt	tggaactcaa	tgcttcaa	300
gacaggggca	ttgacgttgt	gaggaataaa	attaaaatgt	ttgctcaaca	aaaagtcact	360
cttccaaagg	cccgacataa	gatcatcatt	cttggatgaa	acaagaacag	cattgacccg	420
acggagccca	agcaagccnt	tgaaggaaga	acccatggga	aaatctactt	ttaaaaacca	480
cttcgntttc	gnccctttgc	nttggaaatg	ctttttngga	ttaagaaaca	attngaagcc	540
ccaatttaan	tnccccgctt	ggggccaatc	ccnttcengg	taaccttggg	ccnngggccn	600
ggcccgggtt	cnaaaanggg	ccnaaaatgt	ccaagcacca	ctttgggnng	ggccccgntn	660
ncttaanggg	gatcccaaac	tttgggnacc	ccannccctg	nggcgnaaaa	ncaatggggc	720
ataaannngg	gttccccctg	ggngnaaaaa	tgggnattnc	ccccncnc		768

<210> 668  
 <211> 659  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(659)  
 <223> n = A,T,C or G

<400> 668						
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ggaaggcatt	caggctcttg	atgaagtcac	attttccttg	gaaacttatg	acattacaac	180
agttcgtgct	tcagtaggta	tgtattttaat	ttccaagtat	attcggaaga	acacagatag	240
cgtggtgatc	ttctctggag	aaggatcaga	tgaacttacg	cagggttaca	tatatattca	300
caaggctcct	tctcctgaaa	aagccgagga	ggagaagtga	gaggcttctg	agggaactct	360
atttggttga	tgttctccgc	gcagatcgaa	ctactgctgc	ccatggtcct	gaactgagaa	420
gtccattttc	agaacatcga	ntttcttntc	aatacttggc	tttgccccag	aaatgagaaa	480
ttccaagaat	gggatngaaa	aacattttct	gaganaaacc	ntttgaggat	tccaatctga	540
taccaaagag	aatctttggc	yaccaaaana	accttnatga	tnggaaacct	tngntaaaaa	600
tnctggttaa	aattnnngga	atccttnact	tngggnata	atcngangg	caaannccc	659

<210> 669  
 <211> 409  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(409)  
 <223> n = A,T,C or G

<400> 669  
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 cttatgctat ctgcgggggcc attcgtagga tgggtgagtc agatgattcc attctccgat 180  
 tggccaaggc cgatggcatc gtctcaaagt aagggtgggg gctcacattt gggcagagtg 240  
 agtggactag gactgctcca gaggcgtggt cttaacgttg tccttttccc ctggttctag 300  
 gaacttttga ctggagagaa tcacagatgt ggaatatattg tcataaataa ataataaana 360  
 aaaaannnnn nnnnnnaaaa aaaaaaactt gtcctcgggc ggaccacgc 409

<210> 670  
 <211> 741  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(741)  
 <223> n = A,T,C or G

<400> 670  
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 aaatctggaa tggtcatagt gtcttcaatg tccttcattc cctggtagac aaatccaaca 120  
 tcaaccgaca gttggaggta tacacaagcg gaggtgacct tgagagtgtg gctggggagt 180  
 atgggcggca ctccctctac aaaatgcttg gttacttcag cctggtcggg cttctccgcc 240  
 tgcactccct gttaggagat tactaccagg ccatacaagg gctggagaac atcgaactga 300  
 acaagaagag tatgtattcc cgtgtgccag aatgccaggc caccacatac tattatgttg 360  
 gggtttgcac atttgatgat gcgtcgttac caggatgcca tcgggtcttc gccaacatcc 420  
 tnctctacat ccagaggacc nagaagcatg ttncagaagg acccacgtac ctttggccgn 480  
 gaccacgcct aagggccaaa attncaacac actggccngg ncggttacct aagtggaatc 540  
 cnaaccttcg gnanccaaag ctttggccgt naatccatng ggccataagc ttggttccct 600  
 gggggggaaa attggtaatn ccggttcacn aatttcccca ccaacnttcc naaaccgggn 660  
 aagcctttaa agnggtnaaa accntggggg tgcccnnaaa gggggggggac ctnaacttnc 720  
 atttaaatng gggttgccn c 741

<210> 671  
 <211> 699  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(699)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 671

ggtacagcag	gaattacaac	tactacctca	ccgagaactc	ctccaccact	gactgttcag	60
gatcccttat	gtcctgcagt	ttgtccctta	gaagaattat	ctccagatag	tattgatgca	120
catacgtttg	attttgaaac	tattcccat	ccaaacatag	aacagactat	tcaccaagtt	180
tcttttagact	tggattcatt	agcagaaagt	cctgaatcag	attttatgtc	tgctgtgaat	240
gagtttgtaa	tagaagaaaa	tttgtcgtct	cctaatecta	taagtgatcc	acaaagccca	300
gaaatgatgg	gtggaatcac	tttattcatc	agttatcaat	gcatagaca	gtagacgaat	360
gcagggatca	aatgtatgtg	gtaaggaggg	atcttccaga	tcataacttc	ctgaatgtcc	420
agttggaaag	atgtagagtt	gttgcccaag	actctcactt	cagtatacca	accattaagg	480
aagaccttgg	cactttttaga	accattgtac	ctggcccggc	cggccgggtc	naaanggccg	540
aanttcacg	acacttggcn	ggccgttact	tagtgggatt	ccgagcttcg	ggacccaagc	600
nttggcggt	atcatngggc	catagctggg	tccngngtg	naaattggta	ttccggttac	660
caattcccca	ccacnnttcc	ancccggnaa	centaaagt			699

&lt;210&gt; 672

&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(377)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 672

actgaagctg	aaatgcagga	agtgggtggc	aaggtttatt	ccagagaagc	caggaagccg	60
gtcatcacc	agcctctgag	agcagttact	ggggtcacc	aacctgactt	cctctgccac	120
tccccgctgt	gtgacttttg	gcaagccaag	tgcctctct	gaacctcagt	ttcctcatct	180
gcaaatggg	aacaatgacg	tgcctacctc	ttagacatgt	tgtgaggaga	ctatgatata	240
acatgtgtat	gtaaatcttc	atgtgattgt	catgtaaggc	ttaacacagt	gggtggtgag	300
ttctgactaa	aggttacctg	ttgtcgtgat	ctgaaaaaaa	aaannnnnaa	aaaaaaaaac	360
ctnggccggn	accacgc					377

&lt;210&gt; 673

&lt;211&gt; 650

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(650)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 673

cgaggtactt	gattggacca	gatgggtgagt	ttctagatta	ttttggccag	aacaagagga	60
agggagaaat	agctgcttca	attgccacac	acatgaggcc	atacagaaaa	aagagctagc	120
caaagcagtg	ttgctggatg	cagtattctc	ttgctaagag	gaaggaaact	gtctcgcata	180
ggagcctata	taaatataaa	catatatacg	tgcactctac	agaatggcct	tcataccatg	240
agaacatttc	tgttttggat	ggggatgtta	cccttgcggt	caacaaaaat	tgattcttgg	300
aactgtaaaag	attacaaccc	aaagtctccc	aggaagctgt	ggggagacca	gaggatcaag	360
ctgaagtga	accagtga	aaccacactg	tggaaggcat	ggcggggcca	ggcacaccag	420

tgcatcctg	cctgcgaaca	ggcctccaca	actttgccgc	ttttcatcgc	ttgggccctt	480
gctaaatagc	tgtgggactg	aattcacaga	aaagaatnta	tttccatagg	ctcttgctgg	540
ctcttcttga	gtctttntct	ttgagtcctg	gnngctatac	cgncgaatag	ggcttggcat	600
tanagtgatg	cttgaacttt	agttcctata	angattnctn	tcgattgcta		650

<210> 674  
 <211> 705  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(705)  
 <223> n = A,T,C or G

<400> 674						
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gaattaggca	gctgggactca	gttttagatga	tcccaatttt	gttggcaaca	tccaaagcat	120
cgtaatcagg	agccagtcga	acatatgcct	tcttctctcc	atcaggccga	atcagggtgt	180
tgaccttggc	cacatcaatg	tcatacagct	tcttcacagc	ctgtttaatc	tggtgcttgt	240
tggctttaac	atccacaatg	aacacaagtg	tgttggtgtc	ttctatcttc	ttcatggcag	300
actcagtggg	cagcggaaac	ttgatgatag	catagtgggc	aagcttggtt	ctcctgggag	360
cgctcttccg	aggatatttg	ggctgtctcc	ggagtgcgag	tgtcttcggc	cgcccgaagg	420
nggggtgacg	tgcgggatct	tcttcttttt	ggggctgtgg	accacctttc	aacactgcct	480
ttttgggccc	tcnaaagccc	ttngctttgg	ctttagcttt	taggaagggg	ccaggaacct	540
tnccttnttc	gcttttcgga	acctgccccg	gccgggcccgt	tcnaaagggg	cnnaatttcc	600
aacncacttg	gcngggccgn	tactaagggg	atnccaanct	ttggnancca	anctttggcg	660
naaancttgg	ggcnataact	gnttccccgg	ngngnaaaaa	tgntt		705

<210> 675  
 <211> 622  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(622)  
 <223> n = A,T,C or G

<400> 675						
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taaaaggatc	tatctttaaa	aataaaactgt	attaaatctg	taacatcaaa	ggcagaagggt	180
ttgtgtgtgt	gtgtgtgtgt	gtgtgtgtat	ctgtgtgttt	aaatcaaggg	gagattgcat	240
ttataaatca	tactggcctt	atgaacatcc	tctgcaataa	atatactttt	tagccttaac	300
tataaattat	atattttagt	gtttaaaaaac	cttccgggtgt	gaaacatcta	agataaccct	360
taaaaaccac	ctgttctcta	ggtaaacctc	tgagggtccct	actttcaaac	accagttggc	420
accaaaggat	tcctaaactt	caacttcttt	aaagaaaaga	aaggaactta	tcacttgcca	480
tgtgagaatg	caaccttttc	tcttnctgca	cgcagctnca	acacccactc	atgcacacag	540
tggccacctt	gctaaagtct	gttgaacagc	ctgcggcgcg	tcaagnatc	accactgcgc	600
gtctatgacc	actcgacact	gc				622

<210> 676

<211> 620  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(620)  
 <223> n = A,T,C or G

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<400> 676
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ttaaagggttt tggagatttt aggtaagaag ttccctgtta ctgagaactc aaagggttac      120
aagttgctgc caccttatct tagagttatt caaggggatg gagtagatat taatacctta      180
caagagattg tagaaggcat gaaacaaaaa atgtggagta ttgaaaatat tgccttcggt      240
tctggtggag gtttgctaca gaagttggca agagatctct tgaattgttc cttcaagtgt      300
agctatgttg taactaatgg ccttgggatt aacgtcttca aggaccagtg tgctgatccc      360
aacaaaagggt ccaaaaaggg ccgattatct ttacatagga cgccagcagg gaatttggtg      420
cactggaaga aggaaaagga gaccttgagg aatatgggtc ggatctcttc atctgcttca      480
gaatggcang tgacaaaagc tatctttgta aaaaaaaaaa aaaaacctgc cgccgncgtc      540
aangccaatt caccctgcgg cgtctatgac cactgnccac tgcnatntgc tactgtntctg      600
ggaatgatcg tncatcnan                                     620
  
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<210> 677  
 <211> 691  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(691)  
 <223> n = A,T,C or G

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<400> 677
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tggactgacc aaaaagcagc tggacagcac aattggaatc caccctgtct gtgcagaggt      120
attcacaaca ttgtctgtga ccaagcgctc tggggcaagc atcctccagg ctggctgctg      180
agggttaagcc ccagtgtgga tgctgttgcc aagactgcaa accactggct cgtttccgtg      240
cccaaattcca aggcgaagtt ttctagaggg ttcttgggct cttggcacct gcgtgtcctg      300
tgcttaccac ccgccaagcc cccttggatc tcttggatag gagttggtga atagaagcag      360
gcagcatcac actggggtca ctgacagact tgaactgaca ttttggcaag gcatcgaaag      420
gatgtattcc atgaagtcac cagtcttaaa cccatgtggt aagccggtga tggaccact      480
gtnaaatcaa ttttaacatg aacctttcnt gnggatttct taatctcggg gcaagttttt      540
aagggtgaat ttttcttttt ctncatgggg gtaatgatgt tnagatgaaa acctttccag      600
ctgatttttg tccaaancaa tnatgggtta atatccctcc agggnnnttt ncttgaagga      660
aattggtnct ttgaggtttt agcttnccgg a                                     691
  
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<210> 678  
 <211> 667  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

&lt;222&gt; (1)...(667)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 678

cgaggtactt	gattggacca	gatggtgagt	ttctagatta	ttttggccag	aacaagagga	60
angggagaaa	tagctgcttc	aattgccaca	cacatgaggc	catacagaaa	aaagagctag	120
ccaaagcagt	gttgctggat	gcagtattct	cttgctaaga	ggaaggaaac	tgtctcgcat	180
aggagcctat	ataaatataa	acatatatac	gtgcactcta	cagaatggcc	ttcataccat	240
gagaacattt	ctgttttggg	tggggatggt	acccttgctg	tcaacaaaaa	ttgattcttg	300
gaactgtaaa	gattacaacc	caaagtctcc	caggaagctg	tggggagacc	agaggatcaa	360
gctgaagtga	aaccagtga	gagcccacct	gtggaaagga	catggcgggg	cgaggcacia	420
ncagtgcatt	cctgcctgcg	aacagnccctn	cacactttgc	cgctttcatc	gcttgggcct	480
tggtaaatac	tgtggactga	atttccagaa	aagaatntat	ttcataggnt	cttnttgctt	540
tcttgagtct	tgtctttgag	tcttggggnt	aanacagtcn	aatanggctt	tgcnttcaag	600
tgancttgaa	cctaagttcc	tntaangana	tcctttcnat	gctatgaaag	gaattttgtt	660
nggggaa						667

&lt;210&gt; 679

&lt;211&gt; 302

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(302)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 679

cgaggtactg	atgggggaagt	gccggcgctt	cttggatgaa	ctagatgcgg	ttcagatgga	60
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ggactgctga	acagagagcc	cagtgtgact	agggatcctg	agttttctgg	gacaattcca	180
gctttaatca	atacattttg	ttaaattgtgc	cataaaatga	gactttttac	gcctttataa	240
ggccttagat	gtaaataaac	tcacccaaac	aaaaaaaaaa	aaaaaanaaa	aaaaaagctt	300
gt						302

&lt;210&gt; 680

&lt;211&gt; 649

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(649)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 680

ggtacgtgct	caggaaatta	aaaacaaaaa	tcaaggaatt	gaacaacaca	tgtgaacccg	60
ttgtaacaca	accgaaacca	aaaattgaat	cacccaaact	ggaaagaact	ccaaatggcc	120
caaattattga	taaaaaaggaa	gaagatttag	aagacaaaaa	caattttggt	gctgaacctc	180
cacatcagaa	tggtgaatgt	taccctaattg	agaaaaattc	tgtaatatg	gacttggact	240
agataacctt	aaattggcct	attccttcaa	ttaataaaaat	atttttgcca	tagtatgtga	300
ctctacataa	catactgaaa	ctattttatat	tttctttttt	aaggatattt	agaaattttt	360
tgtattatat	ggaaaaagaa	aaaaagctta	agtctgtagt	ctttatgatc	ctaaaaggga	420

aaattgcctt	ggtaactttc	agattcctgt	ggaattgtga	attcatacta	agctttctgg	480
gcagtctcac	catttgcata	ctgaggatga	aactgacttt	ggcntttgga	gaaaaaaaact	540
gtcctgccgg	cggccgtcaa	aggcaattca	ccctgcggcg	tntanggacc	actnnggacca	600
ctgggaantg	gctactgtcc	tggaatgtnc	cgtccatccc	aatcaccgg		649

<210> 681  
 <211> 722  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(722)  
 <223> n = A,T,C or G

<400> 681						
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ctctaaagga	gctgataaat	caagcaattt	tttatatcta	caagttaagg	gagaagtaga	180
agccaagggt	gaagaattaa	aatttgatcg	ttactctgta	tttaggcctg	gagttctgtt	240
atgtgatagg	caagaatctc	gcccagggtga	atggctgggt	agaaagttct	ttggctcctt	300
accagactct	tgggccagtg	ggcattctgt	gcctgtgggt	acccgtgggt	tagagcaatg	360
ctgaacaatg	tgggtgagac	caagagacaa	gcagatggaa	ctgctggaga	acaaggccat	420
ccatgacctg	gggaaaagcg	catggctctn	tnaagccatg	acccccattg	gagaaatggg	480
ttttattggc	aacccttaca	cccattaccc	aaatcngnaa	tttcanggtc	taaaaaaaaag	540
tcancctggg	ttaacttttg	ngggttacta	atccttaggc	ttcanttcca	atcaggaaat	600
gatggggcct	ntggattaag	gggttcaaaa	cccgggtttc	cctttggann	cttcggggnc	660
ntttggnaaa	ataaaaaattt	gnnnccctnt	tttaacttga	atnaaaattt	nggggggggc	720
cn						722

<210> 682  
 <211> 530  
 <212> DNA  
 <213> Homo sapiens

<400> 682						
ggtacttgcc	tttagtttat	caggggatgt	gtaaggagct	tcaggagcat	aaatcctgaa	60
aatatcagca	aggcagcagg	ctaccagtaa	gcgaacatcc	ttatcaggat	gcttgaggaa	120
aaaatctgaa	gcaagatgta	aagctagggt	taaaataaagc	tccttttctt	cttcagagtc	180
ctggtccata	tccataaaaag	ttttcacaaac	catctataca	aaaataaaaa	atcaataaat	240
gaaatgctcc	atgtaaaact	acagtcattg	gaaataaagg	tcattgttaat	tgctaagggt	300
aacttcaaat	gaatatactt	tcatttttct	gcagaaagtc	tctatttgag	agaacacaaat	360
tctcctaaaa	ctacaaaagta	aacttctatt	taaaagactt	actaaaatat	tttttcattt	420
acccaaaata	tctgctaacc	agatttttaa	agattaaatt	gcccttatgt	agtagtcatt	480
attggaagaa	ttccaataga	atatttgtgg	aaacttctgg	tctcacttgt		530

<210> 683  
 <211> 745  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature



&lt;222&gt; (1)...(745)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 683

ggtacctgtc	tttctttatt	ccctcatcct	tagtggatca	tttgtatctc	ctgccttatg	60
agaacctttt	gacagaagat	gagacaacca	tatctgatga	tgtggatatc	gctcgggatg	120
tcatatgtct	tataaaatgc	ctccggctga	ttgaagagtc	agtaactgtg	gatatgtcag	180
ttataatgga	aatgagttgt	tataacctac	agtctccgga	aaaggctgca	gagcagattc	240
tggaagatat	gatcactatt	gatgtagaaa	atgtgatgga	ggatatttgt	agtaaaactgc	300
aagagattag	gaacccaatc	catgcaattg	gactacttat	acgggaaatg	gattatgaaa	360
cagaagtgga	aatggaaaag	ggattcaatc	cagctcacct	ttgaatattc	gaatgaatct	420
taccagctc	tatggtagta	acacagcagg	gtatattgtg	tgccagangg	gtgcattaaa	480
atccgccagt	acctgccng	gccggccgnt	cgaaanggcc	naatttccac	acactgggcg	540
ggccgttact	anggggaatc	ccaagctttg	gganccaagc	nttggnctga	atcatggggc	600
ataaactngg	tnccctgggn	ngaaaaatngg	taatccggtt	aacaattncc	ccnccaactt	660
teccnacccg	gnaaccttta	aaggggtaaa	aaccctgggg	gggncccaa	gggagggggc	720
cttaaccttc	ccctttaaat	tggn				745

&lt;210&gt; 684

&lt;211&gt; 628

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(628)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 684

ggttggagac	ccgagaaccg	gaggctggag	agcaaaatcc	gggagcactt	ggagaagaag	60
ggaccccagg	tcagagactg	gagccattac	ttcaagatca	tcgaggacct	gagggctcag	120
accttcgcaa	atactgtgga	caatgcccg	atcgttctgc	agattgacaa	tgcccgctct	180
gctgctgatg	acttttagagt	caagtatgag	acagagctgg	ccatgcgcca	gtctgtggag	240
aacgacatcc	atgggctccg	caaggctcatt	gatgacacca	atatcacacg	actgcagctg	300
gagacagaga	tcgaggctct	caaggaggag	ctgctcttca	tgaagaagaa	ccacgaagag	360
gaagtaaaag	gcctacaagc	ccagattgcc	agctctgggt	tgaccgtgga	ggtagatgcc	420
cccaaactctn	aggacctcgc	aagatcatgg	cagacattcc	ggcccaatat	gacaactggc	480
tcggaagaac	cnagangact	ngacaagtcc	ttgccggccg	ncgtcnaagg	caattcacca	540
ctgnngcgctc	tatgatccac	tgnnactgg	gantgctact	gtctggaatg	ttcgtnatcc	600
cactcacgac	tagnactggc	tagggata				628

&lt;210&gt; 685

&lt;211&gt; 758

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(758)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 685

gcgtgggtcg	cggcccagg	tacggagcaa	atgtttttatt	taataagtta	taagatacaa	60
------------	-----------	------------	-------------	------------	------------	----

tttacagtcg	gcgtttgatt	ccagtttngg	cttcctgtgg	ccaacttaac	acaccccggtg	120
ggcccttcac	aataagcttc	cggctgggtcc	actttctgtg	nggggtgggct	tttaccceaa	180
cactngccca	gatctacacc	tgccacaaga	ntggccactt	tctnaggact	aagcagcaaa	240
acctaaagg	ctgcctgcca	gaccacacta	cacatttggg	ctcaggcaac	gtccctgaca	300
ctttaacctc	attccaaagc	cagctcaggt	ctgcaggaag	gcaggcaaaa	ttccctacac	360
ctcatttctg	gatttctgca	ccacacagnt	ctnactgggt	ctgcccattg	tgaaaagacc	420
ccaataagct	gntggccttn	tttccccaac	cattcccaac	tttnaggggc	aagancccca	480
agaggttcaa	tctggcctgc	tggacctggc	cggcngggcg	ntnnaaangg	ccaaantcca	540
ncacaattgg	gnggncggta	ctaaagggga	acccaacttn	gggnccaaac	tttggggnaa	600
acatggggnn	naahngggnn	ccngggggngn	aaaatngnna	nccnttttcc	aaattncccn	660
ccaanntttt	naaccgggaa	accttaaang	ggnaaaancc	cggggggggc	caaagggggg	720
ggccnannnn	cccnttaaan	ggggnnnggc	ccccccnn			758

<210> 686  
 <211> 697  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(697)  
 <223> n = A,T,C or G

<400> 686						
ggtacagatt	ggcggaatg	tggagaaggt	tggccacagt	ccagagccag	gagcccatgg	60
aacaacttgg	aaggtgactc	aggtgaggct	gtcaatgagg	gaatcccgca	tgctggtggc	120
aatggtgcta	ggctgggctt	cattcagctt	gaagacactc	tccaccactg	acagctctgt	180
gctggttggt	tccaggccac	agaaggcaca	ccagtcattc	accaccatcc	cagcagcaat	240
cacctcactg	cctcggttca	cagtccccgc	cacaaggggg	acttgaagaa	gagaggacag	300
ctcatcctgg	tcttcaattg	aagtcttggg	atgcaccagc	cctccctgat	tgctgaagac	360
acagtatgct	cctactagca	ctgggtcggc	cactgctgtc	tgaagacttc	caccttgagc	420
acatctgcca	gaatttcttc	tgntctctgt	ccaagtctgg	gtggaccaag	gncacgtagt	480
catttcaagt	ggtgacattg	cccaaggctt	aaaaccgttc	ttcaaccgnc	taatctgcac	540
ttggtctggg	aagggtgttg	ccaatgtgtg	caacttctgg	ggccgnggta	ttgtngggac	600
cttgcccggc	cggccgttca	aagggaatt	ccanccaatg	ggggccgtac	tangggaacc	660
ancttgggnc	caacttgggg	naanatgggc	nnaacgn			697

<210> 687  
 <211> 668  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(668)  
 <223> n = A,T,C or G

<400> 687						
acataataac	ctcatcaact	aactttttaa	ttaactgaat	ggctattatg	tattttattac	60
tcaataaccg	tccattacct	aataataag	cactaagagt	atttaaatcat	tacctatttt	120
aattttattt	ataggtgac	aacactgatg	tcaagttagg	ttgaggaact	tatattcaag	180
gtcctccagc	taactgtcga	cacaacaatg	actagaacta	attgtcaggt	ctcctgataa	240
ctagtcact	gttctttcta	ttctaccata	aggttgtagg	gatgaagaat	actgcagttt	300

tactgcataa	atattctgaa	gtcagactta	ctctaaggca	ttcttccttc	agaatacagg	360
ctaaagcaga	attttacaa	ctactgcttc	tttttttttt	ttttttttta	ataaacacag	420
aacattttgn	tcaaaccaaa	tctaactcag	aagtgnaaat	aatgnaagcc	aatcactatt	480
aaaaggcnga	atttcctaaa	gggaaaanta	ccatttaacc	aacctttcta	aagtaaacat	540
cctttccang	ggactgggga	tttagnccta	cacttgaagg	cttcctggga	cctgggcggg	600
acccttang	cnattcancc	atgggggcgg	tctanggnnc	cacttgggcc	annttgggna	660
attnggcn						668

&lt;210&gt; 688

&lt;211&gt; 375

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 688

acatcaattc	agtgagaaaa	ggtgtgtagg	gagccataag	tctgcaaaga	gaaagcagaa	60
cactaaacaa	ggtttctagg	gccatgacac	aatcctccat	cccattttca	ccctttaate	120
ttctgcggtt	cattctaaca	taccaattgg	tcagaatatc	tacaaacttg	accaggcgag	180
gcaccacagt	ataaagccta	taagctgcc	tttcagtctc	aaagaagcca	atgagagact	240
gcatgaagga	caggatccac	cggctctgta	tgttggggct	ttctctaacc	gtgttctcat	300
tgtagagaaa	ttctatttct	tcctccttct	ggagcctcag	aacgttcttg	attaagaagc	360
gataggcatt	gtacc					375

&lt;210&gt; 689

&lt;211&gt; 582

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(582)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 689

ggtaccaaaa	gttaaatgac	ttacctgggc	tgtttagaaa	ctctctacct	agaaagattt	60
ccattaccgt	cagatgttag	gagaggatct	aacataggaa	aggtcaccag	ttgtcacaga	120
aaaagccaaa	gaacttaggt	ctagtgcctc	tttgccactg	acaaactaat	aacacctctt	180
agacatcctc	aagtccttct	ccttgctcag	gaattttctt	ctaccagggtc	ttttctacca	240
acttctctgt	ataactacat	cttactcatc	tttcaaagcc	cgactcagtt	gccccctcca	300
tctagaaaac	tttccagacc	aaactatccc	agcacatggg	tatgatctct	caaacctctg	360
tgtttcccca	tccctgttgc	ccgttaaatt	ctgccacaag	ctcagaccga	ctctctattt	420
ggcttatttg	tgtctaattc	attgagttct	cctccaaaagc	agagatcatg	cttcactcat	480
ttctgcatct	ncaggacctt	atgaatgaat	gaatgtgtga	attataagga	ttactaaagc	540
cncagggcct	gactcaaagc	caggacccta	gtaggngcct	gg		582

&lt;210&gt; 690

&lt;211&gt; 812

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(812)

&lt;223&gt; n = A,T,C or G

```

<400> 690
actaaagcgg atgggaatgt cgtttggcct ggagtcaggc aaatgctctc tggaggatct      60
gaaacttgcg aaatccctgg tgccaaaggc tttagaagggt tatatcacag atatctccac      120
aggaccttct tggttaaatc agggactact tctgaactct acccaatcag tttcaaattt      180
agacctgacc actgggtgcc ccttacccca gtcaagtgtg aaccaagggt tatgcttgga      240
tgcagaagtg gccttaacaa ctgggcagtt cctggcccca aacagtcacc agtccagcag      300
tgcggncntn nactgnttcg agtcccgaag cgaagacccc ctggtcgttc aatgatgaan      360
atgaaggaan atgatgaagg agggattccc tnttcccaa gaattaaaga ccangaagaa      420
agccctacct tttcaaatat ggtgaatgcc tcaatggtgt ggtttggtaa ntgggtgaag      480
cctcnttggg ttttttgaag atggaattgg ctttcaagtc cttttggccc tttgggtttg      540
gcacttgggg ngggttcaan nggaaaaanc tttngnggaa aacncccat ttaggcccaa      600
attcnccatt gaaanggctt tgaaaaatgn atttggnaaa ttgnaaaagg ttnaaccctt      660
aangggggna attgnaaaan tnttgggccc aaccngaacc ccnttnnaan gggnttttnc      720
cccaannaaa agcctggcnt ttttgaggg gaaaaaanng gggggataaa nccccataa      780
aaaatttgcc cnnntnnaag ngccaccntt tt                                     812

```

```

<210> 691
<211> 691
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(691)
<223> n = A,T,C or G

```

```

<400> 691
acctactata atacagtagc taacatgtat tgagcacaga ttttttttgg taaaactgtg      60
aggagctagg atatatactt ggtgaaacaa accagtatgt tccctgttct cttgagcttc      120
gactcttctg tgctctattg ctgcgactg ctttttctac aggcattaca tcaactccta      180
aggggtcctc tgggattagt taagcagcta ttaaatcacc cgaagacact aatttacaga      240
agacacaact ccttccccag tgatcaactgt cataaccagt gctctaccgt atcccatcac      300
tgaggactga tgttgactga catcatttta tcgtaataaa catgtggctc tattagctgc      360
aagctttacc aagtaattgg catgacatct gagcacagaa attaaggnaa aaaaccaaag      420
caaaacaaat acatgggctg aaantaactt gatgccaagc ccaaggcact gatttctggg      480
natttgaaat tanggcaaat cagagctaca cagacgccta cagaaggttc aggaagangc      540
agaagccttc aatttgaaaag aaattttatt gcaccaaagt aaggggccgga tnaaccttta      600
ggcnttttta nggagggcct tttaaaaagg ntcttgggcc ggaacnctt angngnaatt      660
ccanccntgg gggccgtatt aagggaacct n                                     691

```

```

<210> 692
<211> 271
<212> DNA
<213> Homo sapiens

```

```

<400> 692
cgaggtactg ctgctaccac tggaagcgct gcgcctcttt cgggttttgt cccggccgcg      60
atccttctca ctcgactcct tgggtggccc tttatctttt gagcgatcct tggacttctc      120
atctgagcgg tctttgcgtt tggtaggtga aggagcccta gtgctggact ttttattatg      180
agaaacgata cctaatacga tgcaatttac gccgaagagc agcatcttcc ctccgccgcc      240
acctcctcct gctttcctca gccgccgagg c                                     271

```

<210> 693  
 <211> 730  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(730)  
 <223> n = A,T,C or G

<400> 693  
 cgagggttttt ttttgccgca catgaaacat tattttaatt ggttttaaagt ccctttataa 60  
 agagtgtctac atgggtttaga taaaggaaac atataactat tgagttacag gggattttat 120  
 taattataaa atgcaatcaa tttaaattac gtaggtttta gactagtccc ttggataagc 180  
 cccaagcgaa tttgtcttca gattattaaa attagtgtctg taaatcaggg tgggcaattc 240  
 acagcctttc tgaactgact gaactagagc ttgcagtga gtgttctgct gagactgagc 300  
 accttacaga tatttttctc cagaagatgg tgctgggtaa taaaatcatc acaattaggg 360  
 gaatgggttaa gtggtctcta ctgnggcaaa tgccaactgn tggaattcac tttattgtag 420  
 aaaaacccaa actgagactc ttaagttttg gttacaatg nggttctggg atgaaaccaa 480  
 ctactggggc actgnccagg taggaaacca ttctttcact ggggtttcag cataaatggg 540  
 aactggatgt tnaaaggcng ggaattaacc ctttttaggc caaaagaaaa agcttaantg 600  
 gggntttacc aangggntcc ctggggctta aattcaannn tgggncctac annngccnna 660  
 anccctggnt aaacccggat taacccttta acctgggaac ccaaccttta aanggggggt 720  
 tttaaaaggg 730

<210> 694  
 <211> 700  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(700)  
 <223> n = A,T,C or G

<400> 694  
 cgaggttaca aaccacaaag acattggaac actataccta ttattcggcg catgagctgg 60  
 agtcctaggc acagctctaa gcctccttat tcgagccgag ctgggccagc caggcaacct 120  
 tctaggtaac gaccacatct acaacgttat cgtcacagcc catgcatttg taataatctt 180  
 cttcatagta atacccatca taatcggagg ctttggcaac tgactagtcc ccctaataat 240  
 cgggtgcccc gatatggcgt ttccccgcat aaacaacata agcttctgac tcttacctcc 300  
 ctctctccta ctctctctcg catctgctat agtggaggcc ggagcaggaa cagggtgaac 360  
 agtctaccct cccttacagg gaactactcc accctggagc cttcgtagac acaccttgga 420  
 gttttttcga aatatgggtt ggggtttttg gctctttggg tgaattaaaa taaaatttaa 480  
 atgccttcac gctgngatag gtgccacatg aactaccgag nttcngaaaa agaagggaga 540  
 actgacactt cttannntt gcagactntt aangggccct taggactant ngggcttttg 600  
 ggggtaaaag gtnccttna agaanccng nacctggccn ggggggcgtt naaangggga 660  
 attcnanccn ctgggggcc; tactaagggg acccactnng 700

<210> 695  
 <211> 690  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(690)  
 <223> n = A,T,C or G

```

<400> 695
ggtacagatg gcactgacaa tcccctttct ggtggggatc agtatcagaa catcacagtg      60
cacagacatc tgatgctacc agattttgat ttgctggagg acattgaaag caaaatccaa      120
ccaggttctc aacaggctga cttcctggat gcactaatcg tgagcatgga tgtgattcaa      180
catgaaacaa taggaaagaa gtttgagaag aggcatattg aaatattcac tgacctcagc      240
agccgattca gcaaaagtca gctggatatt ataattcata gcttgaagaa atgtgacatc      300
tccctgcaat tcttcttgcc tttctcactt ggcaaggaag atggaagtgg ggacagagga      360
gatggccctt ttcgcttagg tggccatggg ccttcctttc cactaaaagg aattacncga      420
acagaaaaaa gaaggctctg agatagtga aatggtgatg atatctttag aagggtgaaga      480
tgggttggat gaaatattt cattcatgag agtctgagaa aactgngccg tcttcaagaa      540
aattgagagg cttccattca cttggnccgt ccgactgacc atgggtccaa ttggctataa      600
ggttgacagc ttaaatcgat ttncngggna ggggttaaaag cttggnccgt tgggttccaa      660
acctaaaaaa aannnnnnnn aaaaaanant                                     690

```

<210> 696  
 <211> 688  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(688)  
 <223> n = A,T,C or G

```

<400> 696
ggtacagaaa tgaggcgtcg cagaatagag gtcaatgtgg agctgagggg aagctaagaa      60
ggatgaccag atgctgaaga ggagaaatgt aagctcattt cctgatgatg ctacttctcc      120
gctgcaggaa aaccgcaaca accagggcac tgtaaattgg tctgttgatg acattgtcaa      180
aggcataaat agcagcaatg tggaaaatca gctccaagct actcaagctg ccaggaaact      240
actttccaga gaaaaacagc ccccataga caacataatc cgggctgggt tgattccgaa      300
atattgtgtc ttcttgggca gaactgattg tagtcccat cagtttgaat ctgcttgggc      360
actcactaac attgcttctg ggacatcaga acaaaccaag gctgtggtag atggaggtgc      420
catcccagca ttcatttctc tgggtggcatc tccccatgct cacatnagtg aacaagctgt      480
ctgggctcta ggaaacattg caggtgatgg cttcaatggt nccagacttg ggtanttaag      540
acctggccgg ccggccgttc aaaaggccaa ntccacacct tggcggccgt ctannggatc      600
caactnggac caacttggg naacatggca aactggttct tggggaaatg gttccgttcc      660
aattcccaaa tttcaccgag gctaaagg                                     688

```

<210> 697  
 <211> 732  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(732)  
 <223> n = A,T,C or G

```

<400> 697
gcgggtcgcg gccgaggtac tcccgattga agccccatt cgtataataa ttacatcaca      60
agacgtcttg cactcatgag ctgtcccccac attaggctta aaaacagatg caattcccgg      120
acgtctaaac caaaccactt tcaccgctac acgaccgggg gtatactacg gtcaatgctc      180
tgaaatctgt ggagcaaacc acagtttcat gcccacgtc ctagaattaa ttcccctaaa      240
aatctttgaa ataggggccc tatttaccct atagcaccct ctctaccccc tctagagcca      300
aaaaaaaaaa aaaaaaaaaa aaaaaaagct tgtaccatct cccagtcctg gaggctggcc      360
atgtgagacc caggtattgc agggctggtt gcttctgagg ctgaggtgtg tcccgctctg      420
ctccaggccc ttcccagctg gtcttctccc tacatttgca gacngatggc catccgaagn      480
tgacatcatc tcctttgggg ctggctctgg gnccattggg aattaatggt ttanagacng      540
aattcactgg ggtgcttaag cttgggcttc aaaccggtag gnttaaacnn nnttntcttc      600
ttagccttcc aagtaactng atnccnggct taanccccctg ggcccanccc aaagtccccc      660
cttttttaan gggcctcttt ttaatngggt taaggncnc tggaaggatt cntnttaact      720
nggaaancnt na                                         732

```

```

<210> 698
<211> 651
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(651)
<223> n = A,T,C or G

```

```

<400> 698
cgaggtgcca cgtaatgtcc cgtagtctgc tcatcccgtc catgccagat ggattgtggg      60
gaaggtgatt gggacaaaaa tgcaaaaagac tgctaaagtg agagtgacca ggcttgttct      120
ggatccctat ttattaaagt attttaataa gcggaaaacc tactttgctc acgatgccct      180
tcagcagtgc acagttgggg atattgtgct tctcagagct ttacctgttc cagagcaaaa      240
gcatgtgaaa catgaactgg ctgagatcgt tttcaaagtt ggaaaagtca tagatccagt      300
gacaggaaaag ccctgtgctg gaactacctt cctggagagt cccgttgagt tcggaaacca      360
cccagctaag caaaaatctg gaagaactca atatctcttc agcacagtga agcgggagtg      420
gaagaaggat ctaaagggaa aaactgacat gtttatgtta tggaaaaaga aattttctaa      480
gttcatcaca actgngtcag ttcttgngng ttatgaatac taaaccaatg aataanggct      540
actatggttt tacaaaaaaa nnnaataaaa anaactgnct gccggggcgt naaggnaatn      600
accatgngcg tntntgggnc acttggccac ntggganngg cnantgtctg g                                         651

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```

<210> 699
<211> 709
<212> DNA
<213> Homo sapiens

```

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<220>
<221> misc_feature
<222> (1)...(709)
<223> n = A,T,C or G

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<400> 699
actgtagcat attaataccc cgtgaactgc aaaaaaccaa atacatttac agtagtattg      60
gtcaccaaaa tagaggggaa actttacaat tgtgagaatg tgtaaagtgt ctcattaagg      120
cagtattgac ccagacaacc atttagtatt catctatccc ctcaatgcct cataattctg      180

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gaatgcctgt	tgtgaaacat	gtcagtgac	agtgtctcct	aaattctcac	acgtgcttga	240
ttttctgatt	catctgggtga	actgggagta	ggaagttggg	catagacaat	atgccctcct	300
tctcttgtct	gaccaaagct	tgaagcaatc	acatctactg	ccaggtagc	tgtagtcttc	360
gcctcttctc	ctgaggtggc	caactgagga	ttgacttcaa	caagatccag	tgctgatagc	420
aacctgnat	tgggtattcc	tcagcaatat	acatgccttc	tcgatanggt	aagtcccccg	480
acacaggagt	tncgtgggt	tggagcccgt	gtaggggcaa	atgcntnaat	atcnaaactt	540
caaattggaat	gggtcttttg	ctcttgccaa	tcancngaac	caaangttcg	ntccctgaac	600
cntttggaaa	cccagtttat	tcaanttttn	tcangggaaa	aaacctggga	atcnaagnct	660
tttaaaaaa	aaggttcnga	ngggncnccg	tttttnaacc	aaaaaaccc		709

&lt;210&gt; 700

&lt;211&gt; 656

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(656)

&lt;223&gt; n - A,T,C or G

&lt;400&gt; 700

ggtcagaacc	taaaggtttc	actgaatgcg	aaatgacgaa	atctagccct	ttgaaaataa	60
cattgttttt	agaagaggac	aaatccttaa	aagtaacatc	agacccaaag	gttgagcaga	120
aaattgaagt	gatacgtgaa	attgagatga	gtgtggatga	tgatgatatc	aatagttcga	180
aagtaattaa	tgacctcttc	agtgatgtcc	tagaggaagg	tgaactagat	atggagaaga	240
gccaagagga	gatggatcaa	gcattagcag	aaagcagcga	agaacaggaa	gatgcactga	300
atatctcttc	aatgtcttta	cttgaccat	tggcacaaac	agttgggtgtg	gtaagtccag	360
agagtttagt	gtccacacct	agactggaat	tgaagacac	cagcagaagt	gatgaaagtc	420
caaaaccagg	aaaattccaa	agaactcgtg	tcctcgagct	gaatctgggtg	atagccttgg	480
tctgaagatc	gtgacttctt	tacagcattg	atgcatatag	atctcaaaga	ttnaagaacn	540
gaacgtcntc	ataagcagt	atgtccgaag	ganatgtctt	aaactgntga	aaaatanctt	600
tcttgacgta	ttcaccgaaa	gcggactatc	caatattcnc	nacgggttta	ctgcnn	656

&lt;210&gt; 701

&lt;211&gt; 716

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(716)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 701

ggtaccttga	cagggacgag	aggtcgaagg	agttgccagc	cccatctttg	aatgaacatt	60
cagtcagatc	gaaagggtggg	caggcatact	gcgttcgcca	ctcaaacaag	taggaacaat	120
ctgaagtctc	ctttagaaat	actggccgct	gggtgccgcg	gtcacagtag	aagaagatgg	180
ctgtggagcg	ctgataaacc	ttatggcaag	tgccccccc	gtgaagttca	tttttaacaa	240
gccattttca	taagtttagct	tctgagtcag	gagacctgcc	actttgtgaa	atccctgcgg	300
ttcccgtttt	tcctgacatg	aggagaccac	cttggacttg	ncacttgtgg	gggcagacgt	360
ctgaggaaaa	gctttccaca	gaccccgaaa	gtaataaagt	gtattcgcca	gcgctnacga	420
atgggtgtcgt	tgaagcccaa	gggtcttnang	tcatacaagt	tgccatgccc	ttgggtcttt	480
caccttacia	gttgncnccn	ttcacttttg	acaacgggac	caggctttca	caagttttcc	540



aantaacccg	taccttgccc	nggccggccg	ttnnaaangg	gcnaattcca	nncacttggn	600
ggccgtacta	aggggatccc	aactttggac	ccaacttggn	gnaaanatng	ggcntaactg	660
gttccttggt	gnaaaatggt	tcccgttcaa	aattcccn	aantttgagc	cggaag	716

<210> 702  
 <211> 707  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(707)  
 <223> n = A,T,C or G

<400> 702						
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gcaggtactc	atcttatact	gaaagaacgt	gggtggctcta	aatatgaagc	tgcaaagaag	120
tggaatttac	ctgccgttac	tatagcttgg	ctggttgaga	ctgctagaac	gggaaagaga	180
gcagacgaaa	gccattttct	gattgaaaat	tcaactaaag	aagaacgaag	tttggaaaca	240
gaaataacaa	atgggaatcaa	tctaaattca	gatactgcag	agcatcctgg	cacacgcctg	300
caaaactcaca	gaaaaaccgt	cgttacacct	ttagatatga	accgctttca	gagtaaagct	360
ttccgtgctg	tggtctcaca	acatgccaga	caggtcgcag	cctcccagca	gtaggacaac	420
cacttcagaa	ggagccctcg	ttacacctgg	atacaccatc	aaaattcctg	tccaaggaca	480
aactcttnaa	gccttccttt	gatgtgaagg	atgcacttgc	agccttgga	acttcangac	540
gtccagccac	agaaaaggaa	ccgagtcctn	ggccgcgacc	ccctaaggca	attcacacac	600
tgccggcgct	tagggaccac	ttggggccaa	ttngaaactg	gctactggtc	tgggaaatgtn	660
ccgtacatcc	ncaatnaccg	actaagtaac	tggtgctnngg	gctatcn		707

<210> 703  
 <211> 703  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(703)  
 <223> n = A,T,C or G

<400> 703						
acctgccaga	attagcaaga	gctttcttta	agaagacatt	tgtcaaactc	aacaaattga	60
aggttaacac	cttaagagtt	gtagttactg	accagaaata	tggaacagact	tcttagactt	120
ggaggaggta	tgccctggact	gggccagggg	ccacctacag	atgctcctgc	agtggacaca	180
gcagaacaag	tctatatctc	ttccctggca	ctgttaaaaa	tggtaaaaca	tgccgtgct	240
ggagttccaa	tggaagttat	gggtttgatg	cttgaggaga	ttgttgatga	ttataccgtc	300
agagtgattg	atgtgtttgc	tatgccacag	tcaggaacag	gtgtcagtg	ggaggcagtt	360
gatccagtgt	tccaagctaa	aatgttggat	atgttgaaca	gacaggaaag	cccgaatgg	420
ttggttggtt	ggtatcacaa	gtcacccctg	ctttggttgg	tggtttctg	gtgtggatan	480
tcaacacttn	agcagagctt	ttgaagcctt	ttccggaaaa	nagctttggc	antgggttgt	540
ggatcccttt	canaatggta	aaaggaaagg	ttggttaattg	atgccttcan	aatggancaa	600
ggctaaatna	agggttagg	acttgaaccc	ggacaanaan	tttaaattng	gncctttaa	660
caagcctttt	ntcnggcttc	attttggtt	accnctttt	tnn		703

<210> 704

<211> 683  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(683)  
 <223> n = A,T,C or G

<400> 704

cgaggtactg	agggatagga	gagtatatgg	gtttggcacc	acaggggtggg	taggcaaaac	60
aatttggttg	ataaggctca	gacccctgaac	taacctgtaa	gggcttgctt	ggttcgagga	120
caggtgaaat	gggggaattg	taagtagagt	ttataggctt	taaaaggcca	tgctgtagca	180
ggcgagtgat	aacaggcttt	aatcttttta	aagcatgctg	tgggatggga	tattggcatt	240
gagcggggta	agggtgattt	ggttttaatg	agatggtaag	gggtccatga	tcggtcacca	300
aggaggaggt	agaggtatct	tatacttggt	ggttaagggt	gggggataca	agaggaggac	360
gcanaggagg	ctttggattg	ggaaaaaagg	gcaccaatga	gatgtaccnt	aatccaggaa	420
tagtcaggga	aacnnatagt	tanttaaaag	tgtctcggct	aatangggac	tgggcagtgg	480
ggatactaaa	aaggatgctt	aaaaagtatg	nctaagttgc	accnnattna	ngagttaaaa	540
aaggttaaaa	acttgctggn	aatcctanca	ccnttttgga	gcnagaaaac	aggcccttna	600
aanaagggtat	ntgaatggga	accccntntt	aaaaggggcg	gcntaatttc	cctgnaaagt	660
cttnaactnt	nnaaggccct	acn				683

<210> 705  
 <211> 463  
 <212> DNA  
 <213> Homo sapiens

<400> 705

ctgaaagtgc	atgaaggacg	cgattacctg	cgataagctt	cgtggagtgg	gaaataaaact	60
atgatacgga	gatttccgaa	tggggtaacc	taactgagca	aacctcagtt	gcattttgat	120
gaatccatag	tcaaattagc	gagacacggt	gcgaattgaa	acatcttagt	agcaacagga	180
aaagaaaata	aataatgatt	tcgtcagtag	tggcgagcga	aagcgaaaga	gcccaaacct	240
gtaaaaaggg	gttgtaggac	atcttacatt	gagttacaaa	attttatgat	agtagaagaa	300
gttggaagc	ttcaacatag	aagggtgat	tcctgtatac	gaaatcataa	aatctcatag	360
atgtatcctg	agtagggcgg	ggcaccgtga	aacctgtct	gaatctgccg	ggaccacccg	420
gtaaggctaa	atactaataca	gacaccgata	gtgaactagt	acc		463

<210> 706  
 <211> 651  
 <212> DNA  
 <213> Homo sapien~

<220>  
 <221> misc\_feature  
 <222> (1)...(651)  
 <223> n = A,T,C or G

<400> 706

actatagcat	ctgtggaaaa	tcttagaaaa	aaacattttc	tccccaccc	tctctcttcc	60
ctgttaagac	catcccaaaa	tgttcaagt	aaaaaataac	aagtttaagg	ggttaagcac	120
ttttaaagtc	tgattaaggg	ggtgggggga	aaaaagagta	actaccagcc	atttctccaa	180
tggacatctc	ttccacagac	ctcaacgtga	gaactgctct	agtttctata	aactgtaaac	240

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ctgtgggtgggt ctgatttatcc tgatatttggg ttttcttgggt ttctgtttaca ccttgagtca 300
tttgcccttta ggattcttaga cagacctaaag ggaaaaagaa ctgaaaacat attttgcccc 360
cacccccaca aaaaaaaata ctgaaaactc cccccgcct cagttacaca tccaaactct 420
acatttacaa aacgaattca ggggtgaggaa gtaaaacagg tcatctattc acaaaactga 480
aatacttcat taccccaact aaacatacaa actgntttaca gattgctgaa atgggtcaat 540
ttggctatca aattcatttg ggtttcctca aatcngntaa aaaaaaaaaa aaaaaaagct 600
tggncctnng ccgnaacacn cttangggca aatccanccc ctgggngggc g 651

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```

<210> 707
<211> 625
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(625)
<223> n = A,T,C or G

```

```

<400> 707
gggtggcggt cgggacggag gacgcgctag tgttcttctg tgtggcagtt cagaatgatg 60
gatcaagcta gatcagcatt ctctaacttg tttgggtggag aaccattgtc atatacccgg 120
ttcagcctgg ctcggaagt agatggcgat aacagtcatt tggagatgaa acttgctgta 180
gatgaagaag aaaatgctga caataacaca aaggccaatg tcacaaaacc aaaaagggtg 240
agtgaagta tctgctatgg gactattgct gtgatcgtct ttttcttgat tggatttatg 300
attggctact tgggctattg taaaggggta gaacccaaaa ctgagtgtga gagactggca 360
ggaacccgag tctccagtga gggaggagcc aggagaggac ttccctgcaca cgtcgcttat 420
attgggatga cctgaagaga aagtgtgcgg agaaactggc agcacagact tcaccagcac 480
catcaagctg ctgaatgaaa atcatatgtc cctcgtgang ctggatctca aaagatgaaa 540
atctgcttga tgttgaaatc aattcgtgaa ttaactcaca agttgcgtga cacatttgta 600
aatcngcaaa cacntnaaac tgggn 625

```

```

<210> 708
<211> 209
<212> DNA
<213> Homo sapiens

```

```

<400> 708
actgttccat ctggaagtca agattgggtgc cacctaagtg gggtcctgct gcaaggaact 60
taaggacatc ctctctcttc atttgcagga catcaagggc tccggacatt gtgaaagttt 120
ccctttaagt tacgacggga atccagaaca acgccgtatg gaccctctg caggtagcac 180
ggaaaaaaaa aaaaaaaaaa gcttgtacc 209

```

```

<210> 709
<211> 643
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(643)
<223> n = A,T,C or G

```

```

<400> 709

```

ggtaactcctt	agagccagtt	getgtagaac	tcaaattctct	gctgggcaag	gatgttctgt	60
tcttgaagga	ctgtgtaggc	ccagaagtgg	agaaagcctg	tgccaacca	gctgctgggt	120
ctgtcatcct	gctggagaac	ctccgctttc	atgtggagga	agaagggaag	ggaaaagatg	180
cttctgggaa	caagggtaaa	gccgagccag	ccaaaataga	agctttccga	gcttcacttt	240
ccaagctagg	ggatgtctat	gtcaatgatg	cttttggcac	tgctcacaga	gcccacagct	300
ccatggtagg	agtcaatctg	ccacagaang	ctgggtgggt	tttgatgaag	aaggagctga	360
actactttgc	aaaggccttg	gagagcccag	agcgaccctt	cctggccatt	ctnggcggac	420
taaagttgca	gaccagatcc	agctcatcaa	taatatgctg	gacaaaagtc	aatgagatga	480
ttattggtgg	tggaatggct	tttaccttcc	ttaangncc	caacaccatg	gagattggca	540
cttctctggg	tgatgaaaaa	gggncccaga	ttgcaaagac	tnatgtccaa	actgagaaaa	600
agggntgaan	ataccttgcc	tgtgctttgc	netgttncaa	ttg		643

&lt;210&gt; 710

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 710

ggtaactcttc	tagcatttag	atctacactc	tcgagttaaa	gatggggaaa	ctgagggcag	60
agaggtttaac	agatttatct	aagggtcccca	gcagaattga	cagttgaaca	gagctagagg	120
ccatgtctcc	tgcatagctt	ttccctgtcc	tgacaccagg	caagaaaagc	gcagagaaat	180
cgggtgtctga	cgatttttgg	aatgagaaca	atctcaaaaa	aaaaaaaaaa	gaaaagagaa	240
aaaaaagact	agccagccag	gaagatgaat	cctagcttct	tccattggaa	aattttaagac	300
aagttcaaca	acaaaacatt	tgctctgggg	ggcagggaaa	acacagatgt	gttgcaaagg	360
taggttgaag	ggacctctct	cttaccagg				390

&lt;210&gt; 711

&lt;211&gt; 683

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(683)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 711

cgaggtcaag	aaggcagccc	gagaagaaac	gggaggacaa	agctaagaag	aagcacgaca	60
ggaaatccaa	acgcctggat	gaggaggagg	aggacaatga	aggcggggag	tgggaaaggg	120
tccggggcgg	agtgccgttg	gttaaggaga	agccaaaaat	gtttgccaag	ggaactgaga	180
tcacccatgc	tggtgttatc	aagaaactga	atgagatcct	acaggcacga	ggcaagaagg	240
gaactgatcg	tgctgcccag	attgagctgc	tgcaactgct	ggttcagatt	gcagcggaaa	300
acaacctggg	agagggcgtc	attgtcaaga	tcaagttcaa	tatcatcgcc	tctctctatg	360
actacaacct	caacctggca	acctacatga	agccagagat	gtgggggaag	tgcttggaact	420
gcataaatga	gctgatggat	atcctgtttg	caaateccaa	catttttgnt	ggggggagaat	480
attcttgga	gaaaagtgg	aacctgcaca	acgctgaccc	agcccttgcg	tgccctggc	540
ttgcatnctn	acttttgggtg	ggaaccnaat	gggttaaaga	aattanccca	ataatgccaa	600
atacttgacc	cttanttccc	aaaaatacct	tgcccgggcg	ggcccnttca	aaagggccaa	660
attecancnc	ccttggggggc	ccg				683

&lt;210&gt; 712

&lt;211&gt; 605

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(605)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 712

ggtacaagct	tttttttttt	tttttttttt	tttctaaaca	atagtgcctt	attgataaaa	60
ggttagttta	aatggataca	aaattgctgt	gtaaaataag	tgttttcaaa	atacatttct	120
ataggtagag	actatgtctt	agtaaaagag	cagttatcta	ttatcaaaaag	tatctattta	180
natttgggta	gtaaaaccaa	aggggatcag	aagtgtanca	gtgtgggtcc	tcctccctg	240
catagctgtt	accaggaggc	agcgtgcctg	aagtacttgg	aggaacgaag	aataaaggag	300
attgtgaaga	aacattctca	gcttattgga	tatcccatta	ctctttttgt	ggagaaggaa	360
ccgtgataaa	gaagtaagcg	atgatgaggc	tgaagaaaag	gaagaccaag	aagaagaata	420
ngaanaagaa	gagaaagagt	cggaagacaa	acctgaaatt	gaanatgttg	gtctgatgag	480
gaagaaaaaa	gaaggtgggtg	cnagaagaan	anaagaagat	taggaaagtc	ctgccggcgg	540
ccgtcaangc	aatccaccct	gcggcgtcta	ngaccactgn	ncactgngat	atgctctgtc	600
tggnna						605

&lt;210&gt; 713

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 713

ggtaccaagg	ttattgatca	agtcagcctt	ggtcattcca	attccagtat	ccacaatagt	60
gagagtccga	tcttgtttgt	tcgggtataag	gttaatatgc	agctctttcc	cagagtctaa	120
tttactggga	tctgtcaagc	tttcataaccg	gattttgtcc	aatgcatctg	atgaatttga	180
aatgagctct	ctcagaaaga	tctctttgtt	cgagtagaaa	gtattgatga	tcaatgacat	240
caactgggca	atttctgcct	gaaaggcgaa	cgtctcaacc	tcctcctcct	ccatcggttg	300
gtcttgggtc	tgggtttcct	caggcatctt	ggctaagtga	cccgcacagg	accaacggca	360
cagccacacc	gacctg					376

&lt;210&gt; 714

&lt;211&gt; 378

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 714

cgaggtagca	aggttattga	tcaagtcagc	cttggtcatt	ccaattccag	tatccacaat	60
agtgagagtt	cgatcttggt	tgttcggtat	aagggttaata	tgtagctctt	tcccagagtc	120
taattttactg	ggatctgtca	agctttcata	ccggattttg	tccaatgcat	ctgatgaatt	180
tgaaatgagc	tctctcagaa	agatctcttt	gttcgagtag	aaagtattga	tgatcaatga	240
catcaactgg	gcaatttctg	cctgaaaaggc	gaacgtctca	acctcctcct	cctccatcgg	300
ttgggtcttg	gtctgggttt	cctcaggcat	cttgggctaag	tgaccgcaca	ggaccaacgg	360
cacagccaca	ccgacctg					378

&lt;210&gt; 715

&lt;211&gt; 310

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(310)  
 <223> n = A,T,C or G

<400> 715  
 actttttgagt gtgtgtgtgc atgtgtgtgt gtgtgtgtgt gtgtgtgtat gtgagagatt 60  
 ctgtgatctt ttaaagtgtt actttttgtt aacgacaaga ataattcaat tttaaagact 120  
 caaggtggtc agtaataaac aggcatttgt tcaactgaagg tgattcacca aaatagtctt 180  
 ctcaaattag aaagttaacc ccatgtcttc agcatttctt ttctggccaa aagcagtataa 240  
 tttgctagca gtaaaagatg aagttttata cacacagcan aaaaaaaaaa aaaaaaaaaa 300  
 agcttgtagc 310

<210> 716  
 <211> 624  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(624)  
 <223> n = A,T,C or G

<400> 716  
 ggtaccgatt gccaggctgt ggtctctctc cagtgtgaca cggctgtagc catctgacac 60  
 agctctgcta accacctcag ccagttctctg gttggcaaga cccactgagc gtggattcac 120  
 tatcagggtt ttgtagagat catctttggg gactggagta aaattcaaat ctccaaagtc 180  
 ttttaggttg cagcccaaac tggagagcct tttcatcaag ccagcttctc ttatggcagc 240  
 gggaccatgc tccactccgt ttcttttctg tccttgtgag aacggggctc ctatcacagc 300  
 cacggagtgg acggatttct tcaggatgga atgcactcgc gtctggagga gacgcgagag 360  
 gctgccctta gggacatgat cccgcagcac tgagaatctc caaggcagag gctccacatg 420  
 gccgggggtg tgaaggcttc aaacataatc tgagtcattc tctctctgtt ggccttgggg 480  
 ttcaaggggg cctcggcaca gcaactgggtg ctcttnccgg ccacgcgcac ttgtgtataa 540  
 gtgngtgcca nactttcatg cgnccaattg gngaccatcc tctnatggga ctgccggggc 600  
 cgttnaaggg gaatcacnt gng 624

<210> 717  
 <211> 652  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(652)  
 <223> n = A,T,C or G

<400> 717  
 cgagggtacaa aaattagctg ggtgtcgtga tgggtgcctg taatcacagc tatgtgggag 60  
 gctgaggcag gagaattgct tgaacctggg aggcgaagg tgcagtgagc caagatcacg 120  
 tcaactgcact ccagcctctt tgacagagtg cgaactctgtc tcagaaaaaa aaaaaaaga 180  
 aagaaaagag attacatatt atttagaaaa cagcagctaa acagtctttg ggtctctggc 240  
 aaagatgaag tgagccagtc ttcttcgcac taaatcacca actggacaaa gttctcagct 300  
 ggaaaacact ccccttcttg gatcctgcgc ccagaagtgg tagcaagaac ttcttgggaat 360

agaatggagc	agaaccttcc	tgagcctgag	gaaccaacaa	aaagtcaaag	aatgaactct	420
ttcgaacaca	aaataaaaatt	tctcaaagcc	caggtcatgc	tttttctgta	aatctttatc	480
cctgcgtcag	tatggacatg	acatagtcca	gagagaaaat	tctcagccta	ccttatgcnc	540
aagaaaatgc	catgatgccg	ccagcttggt	gatgcccnag	gacantgctn	ttganggccg	600
gaaaataggn	ctgcagcngg	gaaccaaagg	ctgttnncct	gnttcttaaa	ag	652

<210> 718  
 <211> 544  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (544)  
 <223> n = A,T,C or G

<400> 718						
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gcatccggaa	ctcaggagtt	acgctcagag	ccaaggttgg	tggacgggag	agggcgagtt	120
caatttttcc	gaagtctttt	ctccagttga	ggatcatcta	gactgcgggtg	ctggcaaaga	180
cagcttagaa	aaacaagaag	aaagcatcac	agtgcagact	atgatgaaca	ccttacggga	240
caaagccagc	ggagtgtgca	tagactctga	gtttttcctc	accacagcca	gtggagtgtc	300
tgtcctgccg	cagaatagaa	gctctccgtg	cattcactac	ttcactggaa	ccccgatcc	360
ttccaggtcc	atattcaagc	ttttcatctt	tggtgatgac	gtaaaacttg	tccccaaaac	420
acaagtctcc	ctgttttggg	ggatgacgac	ccttgcctaa	aaggagcctc	gggttncagg	480
agaaaccnga	accggccggc	attgaacctg	taccttgnc	gggccggccg	nttcnaangg	540
gcga						544

<210> 719  
 <211> 626  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (626)  
 <223> n = A,T,C or G

<400> 719						
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cattaaagga	tcagttggaa	gacttaaaga	aagtcagtc	gaattcacag	cttgctaattg	120
agaagctgtc	ccagttacaa	aagcagctag	aagaagccaa	tgacttactt	aggacagaat	180
cggacacagc	tgtaagattg	aggaagagtc	acacagagat	gaacaagtca	attagtcagt	240
tagagtccct	gaacagagag	ttgcaagaga	gaaatcgaat	tttagagaat	tctaagtcac	300
aaacagacaa	agattattac	cagctgcaag	ctatattaga	agctgaacga	agagacagag	360
gtcatgattc	tgagatgatt	ggagaccttc	aagctcgaat	tacatcttta	nagaggaggt	420
gaacatctca	acataatctc	gaaaaagtgg	aaggagaaa	aaaagagctc	aagacatgct	480
taatcactca	gaaaaggaaa	gaatatttag	agatagattt	aactacaact	taaattnttc	540
acacggtaga	ccagangtaa	tgaccccgat	accaagctcg	ttactgcaac	atcattnttg	600
agaggcaagc	ttggcatggg	taaaaa				626

<210> 720  
 <211> 469

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(469)  
<223> n = A,T,C or G

<400> 720  
gg tactcttt agc attaaat tacatcgtgc atatacaact acacccattt agatttgcct 60  
tggaatataa tttcaaggcc ttaaataatta aaaataattt tataactatt tcatagttaa 120  
attggctctt aaatagtttt gctaggagg aaacattttg tgttctttaa gaaattgata 180  
tgtgtaaatg tgttcactta aatcttgaga aaacctaagg atgaagtctg ttgttttgtt 240  
tttcctaaaa aaggaaaaaa gaaccaaaga aaaatgttga agaacaagaa tatttaccat 300  
taaaaagaag aaacattatc caacaaaaag gagacatata gatttgaaaa cacttatttt 360  
actgncttca acaacaacaa caaacagata ggcaggggaa gtccagagga ctcagaattg 420  
aagcagctct atacaataat gaagggtggac ctgccggggc ggcgctcga 469

<210> 721  
<211> 644  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(644)  
<223> n = A,T,C or G

<400> 721  
acaagggtcaa tctcacttcg agtgaccaca atccggacca ggggtggagtc atctgtgcc 60  
gcacctttca tagcatagta gagcctctca gcaaagaagg cagggcggtt cagggcacac 120  
tgcaagatgg tcttcaaacc actttctaca tatccgaaa actcacggct cacactgctt 180  
aacaagtctc gattagccat cctagaataa gcctccatgg tagctctcag ctgaggaaag 240  
cttcttgttg caaggatcat gttaaagcaa gattcatcg tccctagtct cccctacca 300  
gcttgataga gagctgagc atcttcttga gccatttggg gggtttatact ctggttctca 360  
tcacgatttc cctggcacat ggacacaagt aaacgttcaa aatgtcctga tgtatctgac 420  
ctaattgnct tttcaaggtc tcgtccaaat tctgactgat aacatctgac aatttctcgg 480  
atttctgat ttgggtcttgn gcacaaaatc ttcaatcaat acaccgttcc tgagttcctg 540  
ntnctgcat tgncttccga agcttcaggc atcgnaatcc taggangctt gaaaaggccn 600  
ggatcagttt ttcctattcn cttactttga ttgaaacntt gata 644

<210> 722  
<211> 510  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(510)  
<223> n = A,T,C or G

<400> 722  
cgaggtcgga gatctcgccg gctttacgtt cacctcgggtg tctgcagcac cctccgcttc 60



ctctcctagg	cgacgagacc	cagtggctag	aagttcacca	tgtctattct	caagatccat	120
gccagggaga	tctttgactc	tcgcgggaat	cccactgttg	aggttgatct	cttcacctca	180
aaaggtctct	tcagagctgc	tgtgcccagt	ggtgcttcaa	ctggtatcta	tgaggcccta	240
gagctccggg	acaatgataa	gactcgctat	atggggaagg	gtgtctcaaa	ggctgttgag	300
cacatcaata	aaactattgc	gcctgccctg	gttagcaaga	aactgaacgt	cacagaacaa	360
gagaagattg	acaaactgat	gatcgagatg	gatggaacag	aaaataaatc	taagtttggg	420
gccaacgcca	ttctgggggt	gtcccttgcc	gctgcaaagc	tggtgccgtt	gagaangggg	480
tccctgttac	ctgcenggcg	gccgtcgaaa				510

<210> 723  
 <211> 640  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(640)  
 <223> n = A,T,C or G

<400> 723						
ggtaccaagc	gtatcagcat	tcacctcctt	gcctcacatg	ccagtgggct	caatcacaac	60
cctgcctgtg	aatctgtaat	tgactcctca	acatttgagg	aaggcaaagc	tccaggtccc	120
ccttttcctc	aaactcttgg	catagccaac	gtggccacc	gcctctcttc	catccagctg	180
ggccagtctg	agaaggagag	acctgaggag	gccagggagc	tggactcatc	tgatagggat	240
attagttcag	ctactgacct	ccagccagat	caggctgaga	ctgaagatac	agaagaagaa	300
ctagtagatg	gtttggaaga	ctgntgtagc	cgtgatgaga	atgaagagga	ggagggagac	360
tcagagtgtc	cctcattaag	tgctgctccc	ccagcgaatc	ggtggccatg	atctctagaa	420
ctgtatggaa	attctgacca	aacccctttc	caatcatgag	aaaagtgtgc	cgaccagcct	480
catctacagc	tctttccaac	gttcccctac	catctatttt	ggcactcggg	atgaaaaant	540
ggagaaaactt	tcctgggaac	cnangaagtt	gcttcnatgg	aagatgagcn	cagggacccc	600
aacattgcaa	ccnaccattg	gacggncccc	tttaaatang			640

<210> 724  
 <211> 593  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(593)  
 <223> n = A,T,C or G

<400> 724						
ggtacctgcg	cgccctcgac	gtcaatgtgg	ccttgcgcaa	aatcgccaac	ttgctgaagc	60
cagacaaaga	gatcgtgcag	gacggtgacc	atatgatcat	ccgcacgctg	agcactttta	120
ggaactacat	catggacttc	caggttgagg	aggagttaga	ggaggatctg	acaggcatag	180
atgaccgcaa	gtgcatgaca	acagtgaagt	gggacggaga	caagctccag	tgtgtgcaga	240
agggtagaaa	ggaggggctg	ggctgggacc	agtggatcga	gggtgatgag	ctgcacctgg	300
agatgagagt	ggaagggtgtg	gtctgcaagc	aagtattcaa	gaagggtgcag	tgaggccag	360
gcagacaacc	ttgtcccaag	gaatcagcag	gatgtgtggg	ccaggatccc	cttttgcaca	420
gcatgaggca	aaaatgtcca	ccacccccag	cattgttagc	agatctgctc	ttgctttgca	480
cttttctttc	ttaaacaaac	ctgcataagt	gatctgtgtt	agaaaaactg	ccggcggcca	540
agcaatcacc	atgcgcgtct	atgaccactn	nncactgcna	tatgctantg	tct	593

<210> 725  
 <211> 606  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(606)  
 <223> n = A,T,C or G

<400> 725  
 acngcagctg ctccacggcc ccagcacgaa atgtatcaca ggcagcaatg aggacactga 60  
 agccattctc taacaaccag aaggaaatct tggcaagatt agtagatttc cccactccat 120  
 taacgccgca gaaggtgacg acataagggc gctggcgacg ctgggcatcc atgatgtccc 180  
 ggagca\*gtc tacacgacgc tgtggctgca gaatctgcac cagggactcc tgtagggtt 240  
 gctttactgt ggaagtccac gtgctgaacg tccccatcac ctccccctcc aacttggttg 300  
 caacagattc acagagctgg acggcaatgt ctgcagccac gttcttagca atgagatgat 360  
 cagcatctt gtccagcaca gattccatgt cttcacgact aaagctcttt gaaccacaaa 420  
 ggcccttcag cataccaaac atgccaccca gtgttccttg gtcgcaactan gtttggtaga 480  
 gttttgagca gcccttcgtc atcaanctgt gcatccagat ctgaactgcc ccagaccagc 540  
 cttgaatagg tgatgcctaa caggagctag ggtcatgnng tggagactgg cgnacactag 600  
 gcaatc 606

<210> 726  
 <211> 594  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(594)  
 <223> n = A,T,C or G

<400> 726  
 accacatcat ccatgctgac atctaccgct ggtttaacat ttctgtttgat atttttggtc 60  
 gcaccaccac tccacagcag accaaaatca cccaggacat tttccagcag ttgctgaaac 120  
 gaggttttgt gctgcaagat actgtggagc aactgcgatg tgagcactgt gctcgttcc 180  
 tggctgaccg cttcgtggag ggcgtgtgtc ccttctgttg ctatgaggag gctcggggtg 240  
 accagtgtga caagtgtggc aagctcatca atgctgtcga gcttaagaag cctcagtgt 300  
 aagtctgccg atcatgccct gtggtgcagt cgagccagca cctgtttctg gacctgccta 360  
 agctggagaa gcgactggag gagtggttgg ggaggacatt gcctgcagtg actggacacc 420  
 caatgccag ttatcaccg ttcttgcttc nggatggcct caaccacgct gataaccgca 480  
 gacctcaatg gggaacctgt cctcggcgga cacctaggca atcacacact gcggcgctct 540  
 agtgatccac tcgaccactt gcgatatgga tantgtcttg taatgatcgt acat 594

<210> 727  
 <211> 665  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

&lt;222&gt; (1) ... (665)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 727

gcgtggtcgc	gccgaggtgc	cgtcaaggag	tagaaattgg	tatgcttaga	agcagattct	60
aaaagcagtt	tctcttcaga	acatcttttt	tcataccact	tgataagcat	cttgaaacac	120
catggctgta	gctgcagtaa	aatgggtgat	gtcaaagaga	actatcttga	aacattttatt	180
tccagtcctaa	aatggagctt	tatatttgtt	ttgtcataaa	tctacgtatt	ctcctctacc	240
agatgactat	aattgcaacg	tagagcttgc	tctgacttct	gatggcagga	caatagtatg	300
ctaccaccct	tctgtggaca	ttccatatga	acacacaaaa	cctatccctc	ggccagatct	360
gtgcataata	atgaagaaac	acatgatcaa	gtgctgaaaa	ccagattgga	agaaaaagtt	420
gaacaccttg	aggaaagacc	tatgatngaa	ccacttancc	aaatggtcnt	tactactaag	480
caccgctggn	attcctcatg	gacngnntac	agatgtcnta	agaatctgaa	tcctccaaag	540
accgatgatg	ccganggtcc	tggggggatc	aaaagaaaag	ggnccattt	gcatttggn	600
aaagccanct	gggggttccn	tatTTTTTgt	aaggataaat	gntaaaaatc	tttctntttt	660
anaag						665

&lt;210&gt; 728

&lt;211&gt; 624

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1) ... (624)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 728

ggttaccag	gcagtatctc	tagagtcctt	aacttaatat	tagtaactaa	agaaaagggg	60
tgcgtcggt	gcaggactta	acctaacatc	tcacgacacg	agctgacgac	aaccatgcac	120
catctgtcat	tctgttaacc	tccactatat	ctctatagct	ttgcagaaga	tgtcaagagt	180
gggtaagggt	ctacgcgtag	aatcaaatta	aaccacatgc	tccaccgctt	gtgcggttc	240
ccgtcaattc	ctttaaattt	cactcttgcg	agcatactac	tcaggcggat	catttaacgc	300
gttagctgcg	ttagtgaat	tattccacca	actaatgac	atcgtttacg	gcgtggacta	360
ccagggtatc	taatcctgtt	tgtccccac	gctttcgctc	cttagtgcaa	tatataacca	420
gttagctgcc	ttcgcttatt	ggntcttcc	taatatctac	gcattccacc	gcttcactag	480
gaattccgtt	acctctttat	aatctatttg	gcagtatcca	agcggtgaa	gttgagctta	540
acatttactt	cagacttaca	aaaactacgc	gcttacgccc	aatattccga	tacgttgcac	600
natgattacc	gggggtgtgcc	aaaa				624

&lt;210&gt; 729

&lt;211&gt; 449

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 729

actgacacac	aaagtgcctt	cactggacct	tacagttctc	actgccgttg	gactccagtc	60
cagctttggg	gctggggaca	agtcggcctc	gcttgacctt	caggccctct	ctggggctgt	120
cagtcggact	tctctcagga	agattattga	ctgggacgga	tttcgtggtg	ggttctcgga	180
ggatgggtgcc	tgaatctact	gggctccgct	gagcaacttt	gaccttttgt	gatctgctgc	240
caccagctgt	tggtttggag	gactctgcaa	gattctcttt	gccgagactc	agtggggata	300
gcgctaactt	ctgtgcaacc	aggcgggggc	tggctccagt	tgccatggtt	gttcttcgca	360
ggatatatgg	gctaagtctt	tcctgtcggg	atgtcagcaa	accctttctt	tacaacttct	420

ggaagtcacct ctggctcaaa ctcagtacc

449

<210> 730  
 <211> 646  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(646)  
 <223> n = A,T,C or G

<400> 730  
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 tcatgcagca gcaacaaatg gtcattcaga atgcttacgg ctattaatag gaaatgcaga 120  
 accacagaat gcagtggata ttcaagatgg aaatggacag acgcctctga tgctatctgt 180  
 tctcaacggg cacacagact gtgtttactc attgctgaac aaaggagcaa atgtagatgc 240  
 caaagataag tggggaagga cagcgttgca tagaggggca gttacaggcc atgaagaatg 300  
 tgtagatgca ttacttcaac atggtgctaa gtgcttactt cgggatatga ggggcccgga 360  
 cgcctataca cctgtctgct gcctgtggac acattggtgt tcttggagcc cttttgcagt 420  
 cagcagcatc tatggatgca aatccagcca cagcagacaa tcatggatat ccgnacttac 480  
 tgggcttgta caatggtcac gagacatgtg tagaactgnt tttagaacag gaagttttcc 540  
 agaaaacgga aggaaatgct tttagtccat tgcattgngc cgtgataaat gccacaaaag 600  
 ggctgttaaa ngttaattga tcnttanggg ccacattggg aacccc 646

<210> 731  
 <211> 639  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(639)  
 <223> n = A,T,C or G

<400> 731  
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 aaaattcatt ttcattgttg tctccttctt tttctgtgaa agtcctcata ctgagaaatt 120  
 tgtatatttt atattaaatc acttactatt gatttttgtt gtgattttca aagggtggatt 180  
 cccacagata aaatcttggc tattgcccac aacatagtaa aggggtcacgt gtgacttttt 240  
 ataataggaa gaaaattctg cctttgtgag tgcacatgtc cacatttcat ccctccttcc 300  
 ctcaaaaccc tagagagggg cattaagaa ttgttgatgt atatgcaatg tctgttaaaag 360  
 catgcactat gtatttcac ctcatttatt ggggtctggga ctgaagtttt taaccacat 420  
 ggacctaacc tacttttttg gataaaattc tctgtttggt acaggcaaaa ttctgggtatg 480  
 gcgtgaatgc catgggtcat tctgaatata ttttttctgg aatttatcat acacgatgtt 540  
 gcaatacgtg ctttggtttt taatttgaag ccaacttttc tactgttgaa agacattttt 600  
 gccaaactggn ccttctanaa tggagtctaa gttaggngc 639

<210> 732  
 <211> 538  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(538)  
 <223> n = A,T,C or G

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<400> 732
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gacctgccat ccacctccac cagtccttgg aacccggcag gtcagagttt tctctaattc      180
tattccccgg catcaagtga aactagaac tcacacggaa ggccccgagc aaccactggc      240
ctcggggctg ggtgcaccca ctctcacc cagggagattg tcacaaaaca cgctaggggg      300
cagagacgct gtaaaactgga cacacacgga acacaatgcc ctttccactt acacagcgtg      360
gggatgataa aaaggaatct tttgagcaag tctataattt tacagaattt agagggtggga      420
aagatggcca attttccttc tttatgcctg gggcagacca cctgcttctg gggtaaagtg      480
tttgagaagg aaaaagaccc tgnacctgcc nngggcggcg ctcgaaaggc caattcna      538

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<210> 733  
 <211> 351  
 <212> DNA  
 <213> Homo sapiens

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<400> 733
cgagggtaccc tatggcctat gttgactata agactgtgct gcagattgat gataatgtga      60
cgtcagccgt agaaggcatc aacagaatga ccagagctct catggactcg cttgggcctg      120
agtggcgccct gaagctgccc tcaatccccct tgggtgcctgt ttcagttcag aagagggtga      180
attccttgcc ttcggagaac cacaaagaga tggctaaaag caaatccaaa gaaaccacag      240
ctacaaagaa cagagtgcct tctgctgggg atgtggagaa agccagagtt ctgaaggaag      300
aaggcaatga gcttgtaaaag aagggaacc ataagaaagc tattgagaag t      351

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<210> 734  
 <211> 625  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(625)  
 <223> n = A,T,C or G

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ttcatccaaa tggcaacatc acagagctcc tctgaagga aggtttcgca cgctgtgtgg      120
actggtcgat tgcagtttac acccggggcg cagaaaagct gagggcgcca gagaggtttg      180
ccaaagagcg caggctgaga atatggagag actatgtggc tcccacagct aatttggacc      240
aaaaggacaa gcagtttgtt gccaaaggta tgcaggttct gaatgctgat gccattgttg      300
tgaagctgaa ctcaggcgat tacaagacga ttcacctgtc cagcatccga ccaccgaggc      360
tggaggggga gaacacctag jataagaaca agaaactgcg tcccctgtat gacattcctt      420
acatgtttga ggccccggga atttcttcga aaaaagctta ttgggaaaaa gtcaatgtga      480
cngtggacta cattagacca ccagcccagc cacagagaca gtgctgcctt tcaaactgcc      540
tgccggggcg ccgtcaaagg cnattcacca tggcggcgcc tatggaccac tcggaccact      600
gggaactggc tactgtctgg caatg      625

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<210> 735

<211> 677  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(677)  
 <223> n = A,T,C or G

<400> 735

actttctatg	agaagcgtat	gaccacagaa	gttgctgctg	acgctctggg	tgaagaatgg	60
aagggttatg	tgggtccgaat	cagtggtggg	aacgacaaac	aagggtttccc	catgaagcag	120
ggtgtcttga	cccatggccg	tgccgcctg	ctactgagta	aggggcattc	ctgttacaga	180
ccaaggagaa	ctggagaaag	aaagagaaaa	tcagttcgtg	gttgcattgt	ggatgcaaat	240
ctgagcgttc	tcaacttggg	tattgtaaaa	aaaggagaga	aggatatcc	tggactgact	300
gatactacag	tgcctcgccg	cctgggcccc	aaaagagcta	gcagaatccg	caaacttttc	360
aatctctcta	aagaagatga	tgtccgccag	tatgttgtaa	gaaagccctt	aaatanngaa	420
ggtaagaaac	ctaggaccaa	agcaccaaga	ttcaanngtc	ttggtactcc	acgtgtcctg	480
cagcacaaac	cggcggtgta	ttgctntnna	aaaaccagcg	taccttnggc	cgngaacacc	540
cttanggccg	aatttccagn	ccacttggcn	ggccgntnct	aatgggaatc	cancttcggt	600
acccannctt	ggcggaatca	tgggcatanc	ttggttcctt	gggtgaaaat	ggtattccgt	660
tcaaaattcc	nccaann					677

<210> 736  
 <211> 651  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(651)  
 <223> n = A,T,C or G

<400> 736

ggtactattg	aagaactggc	tccaaatcaa	tatgtgatta	gtggtggagt	agctattctt	60
aattctacaa	ccattgaaat	ctcagagctt	cccgtcagaa	catggacca	gacatacaaa	120
gaacaagttc	tagaaccat	ggtgaatggc	accgagaaga	cacctcctct	cataacagac	180
tataggggat	accatacaga	taccactgtg	aaatttggtg	tgaagatgac	tgaagaaaaa	240
ctggcagagg	cagagagagt	tggactacac	aaagtcttca	aactccaaac	tagtctcaca	300
tgcaactcta	tgggtgctttt	tgaccacgta	ggctgtttta	agaaatatga	cacgggtgtg	360
gatattctaa	gagacttttt	tgaactcaga	cttaaatatt	atggatttaag	aaaagaatgg	420
ctcctaggaa	tgcttgggtg	tgaatctgct	aaactgaata	atcaggctcg	ctttatctta	480
gagaaaaatg	atggcaaaat	aatcattgga	aataagccta	agaaagaatt	aattaaagg	540
ctgattcaga	ngggatatga	ttcggatcct	gtgaaggcnt	ggaaagaaac	ccannaaang	600
gttcngatta	agaaaaaaat	naanaagagn	gccancaaag	gaacttgaaa	n	651

<210> 737  
 <211> 404  
 <212> DNA  
 <213> Homo sapiens

<400> 737

cgagggtactg	tgtggccacc	atgccatgtc	tagagccagg	ctcccgttgt	tggccatgcc	60
-------------	------------	------------	------------	------------	------------	----

ttgctttgag	gcttttggtc	tgcacgagac	gccgcagaga	acgtcttgat	gcctcgctcc	120
ccttatectc	accacttcct	tcttaggggt	ggaaatgctg	gatcaaaggg	tcttcacgtt	180
ttctgacttt	tccacgcatg	gggttagcct	gtgctccgga	gaccctgtga	gcacacatgt	240
ccccagcgca	gcttgtgact	cctgcctctc	tgaccccgcc	aggtggatta	caaagctgac	300
gagtggctga	tgaagaacat	ggatcccctg	aatgacaaca	tcgccacact	gtccaccag	360
tcctctgaca	agtttgtctc	ggagctgtgg	aaggatggta	cctg		404

<210> 738  
 <211> 250  
 <212> DNA  
 <213> Homo sapiens

acatcaaaga	ttacatgaaa	tcaatcaaag	ggaaacttga	agaacagaga	ccagaaagag	60
taaaaccttt	tatgacaggg	gctgcagAAC	aaatcaagca	catccttgct	aatttcaaaa	120
actaccagtt	ctttattggt	gaaaacatga	atccagatgg	catggttgct	ctattggact	180
accgtgagga	tgggtgtgacc	ccatatatga	ttttctttaa	ggatgggtta	gaaatggaaa	240
aaaaaaaaacc						250

<210> 739  
 <211> 582  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(582)  
 <223> n = A,T,C or G

acagtaagga	caaccccaac	ctgctgttca	acatgtgtgg	cttcgagtgc	cgcacccctgc	60
ctaagtgccg	caccagctat	gaggagtcca	cccacaagga	cgggggtctgg	aacctgcaga	120
atgaggttac	taaggagcgc	acagctcagt	gtttcctgcg	tgtggacgat	gagtcaatgc	180
agcgcttcca	caaccgcgtg	cgtcagattc	tcatggcctc	tgggtccacc	accttcacca	240
agattgtgaa	taagtggaa	acagctctca	ttggccttat	gacatacttt	cgggaggctg	300
tgggtgaacac	ccaagagctc	ttggacttac	tgggtgaagtg	tgagaacaaa	atccagacac	360
gtatcaagat	tggactcaac	tccaagatgc	caagtccgtc	cccccggttg	tgttctacac	420
ccctaaggag	ttgggtggac	tcggcatgct	ctcaatgggc	catgtgctca	tnccccaatc	480
cgcctcagg	tgggtccaaa	cagacngatg	taggtatcac	acactttcgt	tcaggaatga	540
gccttgaaga	agaccactta	ttcccacttg	nacctcggcc	gg		582

<210> 740  
 <211> 576  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(576)  
 <223> n = A,T,C or G

ggtaggacac	cgaaccctg	attcagacag	caaaaaccac	gctgggctcc	aaagtggcca	60
------------	-----------	------------	------------	------------	------------	----

acagttgtca	ccgacagatg	gctgagattg	ctgtgaatgc	cgtccctcact	gtagcagata	120
tggagcggag	agacgttgac	tttgagctta	tcaaagtaga	aggcaaagtg	ggcggcaggc	180
tggaggacac	taaactgatt	aagggcgatg	ttgtggacaa	ggatttcagt	cacccacaga	240
tgccaaaaaa	agtgggaagt	gcgaagattg	caattctcac	atgtccattt	gaaccaccca	300
aacccaaaaa	aaagcataag	ctggatgtga	cctctgtcga	agattataaa	gcccttcaga	360
aatacgaaaa	ggagaaaattt	gaagagatga	ttcaacaaat	taaagagact	ggtgctaacc	420
tacaatttgt	cagtggggct	ttgatgatga	agcaaatac	ttacttcttc	agaacacttg	480
ccttgcggtt	ccttggtagg	aggacctgaa	attgagctga	ttgccatcgc	aacaggangg	540
cggatcgccc	cagttctcaa	gctnacagcc	gagaan			576

<210> 741  
 <211> 579  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (579)  
 <223> n = ` , T, C or G

<400> 741						
accttatctg	aaactcttgc	acttcccca	ccagggcaga	aatgaggtgg	gagaagtttg	60
actaaaaatga	gggatggggg	aaagtaaaa	atgttttttt	ttttttgaga	ctcgctttgt	120
cacccaggct	ggagtgcatt	ggcacaatct	caactcaccg	caacctccgc	ctcccgggtt	180
caagcgattc	tccctgcctca	gcctcccagag	tagttgggat	tacaggcgcc	tgccctccatg	240
cctggctaatt	tttgtatttt	tagtagagac	agggtttctt	catgttggtc	aggctgggtct	300
caaactccta	acctcgtgat	ccgcctgcct	cgacctccca	aagtgcctggg	attacaggca	360
tgagccacca	tgcccagcca	aagatcattt	ttttatatag	acttcaccct	ttgtaaatac	420
tgtactgggg	gagtatagag	tagaaaaaaa	gtttagttaa	aacatttggt	tacaaattaa	480
cctttaaaaa	tntaattact	gctaaaaata	gaaggctggt	ncccttaagg	aaaattagn	540
ccatttttga	aatganactt	gggccataaa	tncaggtgg			579

<210> 742  
 <211> 578  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (578)  
 <223> n = A, T, C or G

<400> 742						
ggtacttttg	gatgctttac	taggtgtttt	ccattagaat	tagaccttga	ttttaaatcc	60
aagcaagctt	gaagcccctt	ggcttacagc	atgttcctgc	tgaataactaa	acactcacat	120
ggcaagagtt	gctctggaga	ggtagggcca	gaggaatgct	gctgcactgc	caactcaggc	180
acatgcttag	ctgtaaaggg	aagcgagggtg	aagtcgtcct	gcagcgattt	agagtaaaa	240
tctacccctc	tgaagcacta	ttaagcgctt	aaccgtatat	ttaaatacta	ccatgtgcta	300
tctactgagg	aagattcatg	ttcaattatt	tggaaataat	gcaagcatcc	actaagggcc	360
tttaagcttt	ctttgattat	aattaaqgtt	catttttaagt	tnnttttttt	ctttcaacca	420
gtgtgcccac	tccaatatatt	ctatagtata	ccaaccaccc	caggaatgca	cttttaacaat	480
atcagggatt	tatataacca	aatagtttca	aatccaacaa	aattcccttt	atgaactttc	540
gcttttttaag	actactgatg	ggtacctgcc	gggcggcc			578



<210> 743  
 <211> 592  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(592)  
 <223> n = A,T,C or G

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<400> 743
ggtcttttaga aagtgtccatg attctgcata tactgtttga actgaatcat gatgtcttta      60
gaaagtatat gcagaatcag aatgttccgg gaaatattga gttaactgtg aatatacctga      120
caatgggcta ttggccgaca tatgtgccta tggaagttca tttaccacca gagatggtaa      180
aacttcagga gattttcaag acattttacc taggcaaca tagtggcagg aaacttcagt      240
ggcagtcaac cctaggacac tgtgtgttaa agcagaattt aaagagggtg aaaaggaact      300
ccaggtctct ctttttcaaa cactgggtgct gctaattgtt aatgagggtg aggagttcag      360
tttagaagag atcaagcagg caactggaat agaaggatgg agagttaagg agaacactgc      420
agtcattagc ctggtggcaa aagctagagt tctggcgaaa aaatnccaan ggccaaagac      480
ctttgaanat ggtgacaagt tcanttngta atngatgatt caaaccttaa acttttcagga      540
tnaaggatca atcaaatnca aaaaaaaaaa nnnaaaaaaaa agcttggttcc ga      592

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<210> 744  
 <211> 578  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(578)  
 <223> n = A,T,C or G

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<400> 744
ggtaccaaac atagccctta ggcctgggct aggctctcaa aggtctttcc cagaaatgga      60
ggcagcagta gcttcaaaca ggcacaaaaa cagccaggag gaggcagcat ccactccatg      120
aaggcctaag acaatgaaag gaagccagag caacagacca ccttgggatc cggggagaag      180
ggtaaatggg caaaaggggt gtatttctct atgctctcag aacatcagac cacaccatgt      240
gaatttaagc aggactatth taagtgggga aacaatacta gaagcatttg gtgtattttc      300
ctggcactca cctcctaggt aagcaggaga gcgggacact caggagtgtg gactaaactc      360
acacttaagc tgcctgtcca gaccgtcccc ttggctgaac acaacactga aattgtggca      420
gtgtctgttg cnccagtggg cctncaactta ctaatgagta tgtaaaacag angagccaca      480
gtgaggcntt tcacaaaacc canggtctct gggggaaaaa cgggtttcca ctttctgnct      540
tttgggtgctg gaaagtnoct gaggganaag aagtttgn

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<210> 745  
 <211> 581  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(581)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 745

acagatcagg	caactgtgga	aaatctaaac	gaactgcgcc	aagatctgtc	aaaattccga	60
aatgaaataa	gggatttacc	tggctttcgg	acttctaaat	atgctatgtt	ttatccaaga	120
aattaacat	tttctaaatc	atggagcgaa	taattttcaa	taacagatcc	aaaagactat	180
attgcataac	ttgcaatgaa	attaatgaga	tatatattga	aataaagaat	tatgtaaaag	240
ccattcttta	aaatatttat	agcataaata	tatgttatgt	aaagtgtgta	tatagaatta	300
gttttttaaa	ccttctgtta	gtggcttttt	gcagaagcaa	aacagattaa	gtagatagat	360
tttgtagca	tgctgcttgg	ttttcttact	tagtgcttta	aaatgttttt	ttttatgttt	420
aagaaggggc	agttataaaa	tggacacatt	gcccaaaaag	gttttggaag	antggaagac	480
ccagcaaata	gtanggcttg	acctccttca	caaggatata	cttggaataa	tagaaagtta	540
tggttaataa	tctctgggtt	aggagttcac	atatagttaa	g		581

&lt;210&gt; 746

&lt;211&gt; 506

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(506)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 746

ggtacaagct	tttttttttt	tttttttttt	tttttttttt	taggtagtgg	gtgttgagct	60
tgaacgcttt	cttaattggg	ggctgnnttt	aggcctaacta	tgggtgttaa	attttttact	120
ctctctacaa	ggntttttcc	tantgtccaa	agagctgttc	ctntttggac	taacagttaa	180
atttacaaagg	ggattttaaag	ggttctgtgg	gcaaatttaa	agttgaacta	agattctatc	240
ttggacaacc	agctntcacc	aggctcggta	ggtttgctgc	ctctacctat	aaatcttccc	300
actattttgc	tacatanacg	ggtgtgctct	tttancgttt	cttaggtanc	tcgtctgggt	360
tcgggggtct	tanccttggc	tctccttgca	aagttatttc	tagttaattc	attatgcana	420
aggnataggg	gttaagtcct	tgctatatata	tgcttgggta	taattttcat	ctttnccttg	480
cggnacctgc	ccggccggcc	gttttna				506

&lt;210&gt; 747

&lt;211&gt; 454

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 747

ggtacttttg	cttcaatgat	tggcaacttc	tacagggggcc	agtcttttga	actggacaac	60
cttacaagta	tatgagtatt	atttataggt	agttgtttac	atatgagtcg	ggaccaaaga	120
gaactggatc	cacgtgaagt	cctgtgtgtg	gctgggtccct	acctgggcag	tctcatctgc	180
acccatagcc	cccatctatg	gacaggctgg	gacagaggca	gatgggttag	atcacacata	240
acaatagggt	ctatgtcata	tcccaagtga	acttgagccc	tggttggtgt	caggagatag	300
aagacaaaat	ctgtctccca	cgtctgccat	ggcatcaagg	gggaagagta	gatgggtgctt	360
gagaatgggtg	tgaaatgggt	gccatctcag	gagtagatgg	cccggctcac	ttctgggtatc	420
tgtaaccctg	agcccatgag	ctgcctttta	gggt			454

&lt;210&gt; 748

&lt;211&gt; 569

&lt;212&gt; DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(569)

<223> n = A,T,C or G

<400> 748

ggtaccagct	ggcacaggag	caggggggcat	ggcacctctg	ttgtttatgc	ccatagcacc	60
tcccatagcc	atctgaccca	tccgaatctc	ctgctctctc	gcatcagga	aggttccctt	120
gaatccttcc	tgctgtcgcc	gcatcatttc	ttcttgctgc	cgccgcatct	cttcttcacg	180
gcgccctgcg	tcttcctcct	gcctgagctc	cagttgcttt	cgtttttgca	cctcttggtt	240
gtgcagctct	tccatcctcc	gaagtctctc	ttggcgccct	atcaaactct	gtctcattag	300
catgacctgg	tgctcatggc	gtgcagcttc	catctccatc	tccagcttct	cacgagcctc	360
cttgatgttg	cggtccactt	ggctctgctg	ctgcttctcc	atctcaatga	gtgccttnca	420
gcgcatggca	tattcatact	caaaggaacc	aggctgtgca	aatctgggtg	gctgctctcg	480
ttccttggtg	aatgctgggt	ttataaccag	cttcnttgga	agccctcttc	atcaatctaa	540
cctggtccat	gggctccaca	gtcacaagg				569

<210> 749

<211> 428

<212> DNA

<213> Homo sapiens

<400> 749

acatggatat	tcccaaacca	ttccattaga	aaactgcctt	ccctgcacac	acaacaaaaa	60
cagcgctatt	tcttacacct	attggactga	aagtgccttg	aaatggaatg	gttttagaat	120
atgaagaaga	acacaaacca	agtagctgtg	ggttgaacct	ggacgtgagc	tggtgacagg	180
gccgttgggt	agaaaaccag	catctcataa	acaggtcact	ccactggatg	gtttgtcact	240
ggatggtttg	ttgggggtgg	ggtcacaggc	gcaaaggaca	tgacacgggc	cacgtacgc	300
tactgtaacc	aagagggtgac	ttcagccatg	aataagggtg	agagggtaca	catctacct	360
cggaatataa	taacatacaa	tgacttataa	agtgactaca	tgcatatgag	caagcaaagt	420
acctcggc						428

<210> 750

<211> 569

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(569)

<223> n = A,T,C or G

<400> 750

acctgccaga	attagcaaga	gctttcttta	agaagacatt	tgtcaaactc	aacaaattga	60
agggttaacac	cttaagagtt	gtagttactg	accagaaata	tggaacagact	tcttagactt	120
ggaggaggta	tgcttggaact	gggccagggg	ccacctacag	atgctcctgc	agtggacaca	180
gcagaacaag	tctatatctc	ttccctggca	ctgttaaaaa	tgtaaaaaca	tggccgtgct	240
ggagttccaa	tgggaagtatt	gggtttgatg	cttggagaat	ttgttgatga	ttataaccgtc	300
agagtgttg	atgtgtttgc	tatgccacag	tcaggacag	gtgtcagtgt	ggaggcagtt	360
gatccagtgt	tccaagctaa	aatgttggat	atgttgaagc	agacaggaag	gccggagatg	420
gttggtgggt	gggtatcaca	gtcacccctgg	ctttgggtgn	tggtttctg	gtgtggatat	480

caacactcag cagagctttg aagccttgtc gganagaact tgtggcaagt ggttgtggat 540  
 cccattcaga gtgtaaaagg aaagggtgt 569

<210> 751  
 <211> 568  
 <212> DNA  
 <213> Homo sapiens  
 <220>  
 <221> misc\_feature  
 <222> (1)...(568)  
 <223> n = A,T,C or G

<400> 751  
 acctgaagct caggaggaga tgaaagaagt agccaaacac ccaaagaatc ctgagggttg 60  
 cttgaagcct gtgtggtata gtcccaaagt ttctattgaa ggtgctgatg cagagacttt 120  
 ttcggagggt gagatggtta catttataaa ttggggcaac ctcaacatta caaaaaatata 180  
 caaaaatgca gatggaaaaa tcatatctct tgatgcaaaq ttgaatttgg aaaacaaaga 240  
 ctacaagaaa accactaagg tcacttggct tgcagagact acacatgctc ttcctattcc 300  
 agtaattctgt gtcacttatg agcacttgat cacaaagcca gtgctaggaa aagacgagga 360  
 ctttaagcag tatgtcaaca agaacagtna gcatgaagag ctaatgctag gggatccctg 420  
 ccttaaggat ttgaaaaaa ggagatatta tacaacttca gagaagagga ttttcatatg 480  
 tgatcaacct tatgaacctg taacctcatgt agttgcaagg aancccgtgt gtttgatata 540  
 cattcctgat ggcacacaan gaaatgcc 568

<210> 752  
 <211> 312  
 <212> DNA  
 <213> Homo sapiens

<400> 752  
 accgccaggg atgtcccttc cagccctggg atggactaga ggagcacagc caagccctga 60  
 gtgggaggct gcgggccatt ctccagaatc agggaaactg aaggatgggc ctcatgtctc 120  
 aaggaaggca gagacctggg ttgagcagca gaataaaaga tcttcttcca agaaatgcaa 180  
 acagaccgtt caccaccatc tccagctgct cacagacacc agcaaagcaa tgtgctcctg 240  
 atcaagtaga ttttttaaaa atcagagtca attaatttta attgaaaatt tctcttatgt 300  
 tccaagtgtg cc 312

<210> 753  
 <211> 334  
 <212> DNA  
 <213> Homo sapiens

<400> 753  
 ggtacaagcg tctgcagcag actgtggcgg gcgaaggagc aggattccag ggcgctgttg 60  
 ggcttggtca cgaacgccag cagcaggggt gcaagggcct tggggaaata gtcctgctgc 120  
 accatgtggt tcagcgccat cagggggccg tacagttttt tcccacggga caaaaaatgc 180  
 ctaaggaagg gagaacataa taaaggggtt tctttctctc cctctttctt tcacattaag 240  
 acctacactt aaatatattc catagaaaac catcttccta attgtctttt gaatgaaatt 300  
 ctgacttggt gccacaagga ctaatacccg ccga 334

<210> 754  
 <211> 533

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(533)  
<223> n = A,T,C or G

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<400> 754
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agggcgggccc cggttctggt gtttggcgtc ggaattaaac aaccaccatg tcgagcaaaa      120
aggcaaagac caagaccacc aagaagcgcc ctcagcgtgc aacatccaat gtgtttgcca      180
tgtttgacca gtcacagatt caggagtcca aagaggcctt caacatgatt gatcagaaca      240
gggatggctt catcgacaag gaagatttgc atgatatgct tgccttctcta gggaagaatc      300
ccactgatgc ataccttgat gccatgatga atgaggcccc agggcccatc aatttcacca      360
tgttcctgac catgtttggt gagaagttaa atggcacaga tcctgaagat gtatcagaaa      420
cgcttttgct tgctttgatg aagaagnaca ggcaccattc aggaagatac ctaagagact      480
gttgccacca tgggggggatc ggtttacana ataagaagtg gatgantgtc ctg          533

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<210> 755  
<211> 571  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(571)  
<223> n = A,T,C or G

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<400> 755
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gttaaagtct gaagctcaac ttcagtccgc tttggatact ggcaaaatag aattataaag      180
aggttagcgg aattcctagt gaagcggtagg aatgcgtaga tattaggaag aacaccaata      240
ggcgaaggca gctaactggt tatataattga cactaaggga cgaaagtgtg gggagcaaac      300
aggattagat accctggtag tccacgccgt aaacgatgat cattagttgg tggataaat      360
tcactaacgc agctaacgcg ttaaatgatc cgctgagta gtatgctcgc angagtgaaa      420
tttaaaggaa ttgacgggaa cccgnacaag cggtggagca tgtggtttaa tttngattct      480
acgcgtagaa ccttaccac tcttgacatc ttctgcaagc tatagagata tagtgagggt      540
tacagaatga cagatggtgc atggttgtcc g          571

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<210> 756  
<211> 570  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(570)  
<223> n = A,T,C or G

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<400> 756
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cagacagttt	caggctgact	tcacgagtct	ttcagaccaa	gagcctctcc	acgtcgcgca	180
ggcgctgcag	aaagtgaaga	tcgaggtgaa	cgagagtggc	acggtggcct	cctcatccac	240
agctgtcata	gtctcagccc	gcatggcccc	cgaggagatc	atcatggaca	gacccttcct	300
ctttgtggtc	cggcacaacc	ccacaggaac	agtccttttc	atgggccaag	tgatggaacc	360
ctgaccctgg	ggaaagacgc	cttcattctgg	gacaaaactg	gagatgcac	gggaaagaag	420
aaactccgaa	gaaaagaatt	ttagtgttaa	tgactctttc	tgaaggaaga	gaaacatttg	480
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acctttagg	caaactccct	agtttcacct				570

<210> 757  
 <211> 578  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (578)  
 <223> n = A,T,C or G

<400> 757						
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taagaanacg	tttctggagg	cttagggacc	aaggctggct	tctttccccc	ctcccaaccc	120
ccttgatccc	tttctctgat	caggggaaag	gagctgagt	agggaggtag	agttggaaag	180
ggaaggattc	cacttgacag	antggcacan	actcctccag	agtanagctt	ggagggagat	240
tgaaagtggg	gataatactg	ctgacacctc	ccttgaagct	nagatgggaa	atggacatac	300
ttagaaat	agtgaactta	atagcctgga	tttccctntn	caaaactttt	agaatggaaa	360
atcccatccc	cttccttata	tagtgacttc	taccactac	cttctaccat	tttctacttt	420
gggcttatga	tgatggccat	tatctacatg	ngtttttagn	accctgggtt	ggttctaaan	480
ggggatcttg	gaaccnagn	ttnttgggag	atttttaaga	aggaagtttt	aactgaacaa	540
atggaatggg	cnccagaaag	aatccaggg	tnnccng			578

<210> 758  
 <211> 567  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (567)  
 <223> n = A,T,C or G

<400> 758						
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acaagtatga	aacagagatt	aacattacga	agaccaccat	caaggagata	tccatgcaaa	180
aagaggatga	ttccaaaaat	cttagaaacc	agcttgatag	actttcaagg	gaaaatcgag	240
atctgaagga	tgaaattgtc	aggctcaatg	acagcatctt	gcaggccact	gagcagcgaa	300
ggcgagctga	agaaaacg	cttcagcaaa	aggcctgtgg	ctctgagata	atgcagaaga	360
agcagcatct	ggagatagaa	ctgaagcagg	tcatgcagna	gcgctctgag	gacaatgccc	420
ggcacaagca	gtccctggag	gaggctgcc	agaccattca	ggacaaaaat	aaggagatcg	480
agagactcaa	agctgagttc	aggaggaggc	caaccccggt	gggaatatga	aaatgactga	540
taaggtagaa	acattatgat	gaggagg				567

<210> 759  
 <211> 266  
 <212> DNA  
 <213> Homo sapiens

<400> 759  
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 tggacaagct ggacgttaaa gggaagcggg tcgttatgag agtcgacttc aatgttccta 120  
 tgaagaacaa ccagataaca aacaaccaga ggattaaggc tgctgtccca agcatcaaata 180  
 tctgcttgga caatggagcc aagtcggtag tccttatgag ccacctaggc cggcctgatg 240  
 gtgtgccccat gcctgacaag tacctg 266

<210> 760  
 <211> 381  
 <212> DNA  
 <213> Homo sapiens

<400> 760  
 ggtacactag aaagtctttt acaaaataat catcttagat caacagaaga ccaatcttca 60  
 atgtcgctcct gcaagatggg ttactttaac atctctcctc gttttctcca atgttctcct 120  
 ttagtatggc tggtaattgt tttgggtgatt gccacccctc cgagatgcct tgccataagt 180  
 gctctgttgg ccactgtagt ctgcatatcc ctgtccatat ccatagttcc catagttata 240  
 cccagtataa tcatatccgc catagccact atagttttga tcaccaccat aggcactatt 300  
 gtaattttcca tctcttgat cataatagtt attaaatcct tggttccagt tttggccctg 360  
 acctcgccca cgacccctcg t 381

<210> 761  
 <211> 401  
 <212> DNA  
 <213> Homo sapiens

<400> 761  
 actcagctcc aattatctaa tattcttgaa aggatgctga tattgtttgg ttgtgtcccc 60  
 ccacaaatct caacttgaat tgtatctccc agaattccca cgtgttggtg gacagaccca 120  
 gggggaggta attgaatcat gggggccagt ctttcccgtg ctattctcgt gacagtgaat 180  
 aagtctcatg agatctgatc agtttatcag ggggtttctgc ttttgcttct tctcattttt 240  
 ttcttgccac aatgtaagaa gtgtcttttg cctcccacca tgattctgag gcctccccag 300  
 ccatgtggaa cttaagtcc aattaaacca ctttttcttc ccagtctcgg gtatgtcttt 360  
 atcagcagcg tgaaaacgga ctaatacagt aaattggtac c 401

<210> 762  
 <211> 610  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(610)  
 <223> n = A,T,C or G

<400> 762  
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tcttagctct	gagtcacaggc	ggccccgttc	ccccacgatg	ctgtccagct	gcctcctgag	120
gttggtgatg	tacagtaaaa	acacatctaa	catctttgaa	gaccaaattt	cctgctgaac	180
agtattacag	atttcattgag	cactggaggt	ttgtgttgca	gcgcttggtc	ttcttggcag	240
catttggtgt	gtatttgga	acagaaacac	tagtgactcg	agaagcagtt	acagaaattc	300
ttggcattga	gccagatcgg	gagaaaggat	ttcatctgga	tgtagaagat	tatctctcag	360
gagttctaat	tcttgccagt	gaactgtcga	ggctgtctgt	caacagcgtg	actgctggag	420
actactcccg	acccctccac	atctccacct	tcataaatga	gctggattcc	ggttttcgcc	480
ttctcaacct	gaaaaatgac	tccctgagga	agcgctacga	cggattgaaa	tatgacgtga	540
agaaagtaga	aggaagtggg	ctatgatctc	tncatccggg	ctttaataag	gagacggcag	600
cagcttgtn						610

&lt;210&gt; 763

&lt;211&gt; 578

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (578)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 763

cgaggtagcc	tgaagaactt	ccctaattgcc	atcgagcaca	ccctgcagtg	ggctcgggat	60
gagtttgaag	gcctcttcaa	gcagccagca	gaaaaatgtca	accagtacgg	atgctacttg	120
tccaatgatg	gtaaaagggt	agcttactgg	ttgtcctccg	attcagggtta	gaatgaggag	180
gtctgcccgt	aggagtcaat	aaagtgattg	gcttagtggtg	cgaaatatta	tgctttgttg	240
tttggtatata	tgaggagatgg	ggattattgc	taggatgagg	atggatagta	atagggcaag	300
gacgcctcct	agtttggttag	ggacggatcg	gagaattgtg	taggcgaata	ggaaatatca	360
ttcgggcttg	atgtggggag	gggtgtttaa	gggttggtg	agggtataat	tgtctgggtc	420
gcctangagg	tctggtgaga	atagtgttaa	tgtcattaag	gagagaagga	agaagaagta	480
agccnagggc	gtctttgatt	gtgtantaag	ggtggaaggt	gattttatcg	gaatgggaag	540
tgattcctaa	ggggttggtt	gatcccgttc	tgcaanan			578

&lt;210&gt; 764

&lt;211&gt; 500

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 764

actatataac	agttggcaca	acccacccca	caacagaaga	gaacacattt	ttctcaagca	60
tatgtggaat	agtttccagg	agaaaccatg	tgtaggcca	caaaacaaat	cttaattgaaa	120
tgtaaaagac	tgaaacacaa	agtacagcat	cactcggatt	ctgtgtccaa	tgcccttagc	180
aggaagattg	cttcggaatt	tgacacgaac	catgccactg	tttccatggg	cccaggttac	240
ttttccccag	atgactctgg	ttttgtttgg	tttgccgccca	ggagtgcactg	tggtgttctt	300
tgctttatat	acataagcgc	atctcttgcc	caaataagaat	tctgtttcat	cttcgggccc	360
taaacacctt	caattttaag	aagagctgtg	tgctcccttt	ggttccggag	accccgctta	420
tagccagcaa	aaatggcctt	ygaccacaag	cctttcagac	atagttcctt	tagaagtccg	480
acttcggccg	gcgaccacgc					500

&lt;210&gt; 765

&lt;211&gt; 578

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



<220>  
 <221> misc\_feature  
 <222> (1)...(578)  
 <223> n = A,T,C or G

<400> 765  
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 atggcctttca tgtaattaat gtaggacgaa tgtgttttga tcagtattcc atgttaccgg 120  
 ctactccatg ggggtgtgtg gaaataatca agcgaactgg cattccaacc ctagggaaga 180  
 atgtgggtgt ggctggaagg tcaaaaaacg ttggaatgcc cattgcaatg ttactgcaca 240  
 cagatggggc gcatgaacgt cccggagggtg atgccactgt tacaatatct catcgatata 300  
 ctcccaaaga gcagttgaag aaacatacaa ttcttgcaaga tattgtaata tctgctgcag 360  
 gtattccaaa tctgatcaca gcagatatga tcaagggaagg agcacagtca ttgatgtggg 420  
 gaataaaatag agttcacgat cctgtaactg tcaaacccaa gttgggttga gatgtgggat 480  
 tttgaaggag tcagacaaaa agctgggtat atcactccag ttctctgggan gtgtttggcc 540  
 ccatgacagt ggcaatgcta atgaagaata ccattntt 578

<210> 766  
 <211> 569  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(569)  
 <223> n = A,T,C or G

<400> 766  
 actgtattta tattgtttat attatttttag taatgtaatg ttttgcttcc aaagattgcc 60  
 ttgccttttac attttgtgca aaaatagcag ctatacatta atgacataat aagtatgtct 120  
 agtattattt aagtgcctat tcatattttc tcatcaaagc tttttatgaa tgattataat 180  
 gcattttcta taaaatatta ttgctttcac tgtataccag tgattcaaac tttattgtct 240  
 tcaacagcaa tgacatgaaa tcaactctagt tgcccatcag tgggtggattg gataaagaat 300  
 atgtgggtact atgtgactat cattgatgcc ccaggacaca gagactttat caaaaacatg 360  
 attacagggg acatctcaag ctgactgtgc tgtcctgatt gttgctgctg gtgttggtga 420  
 atttgaagct ggtatctcca agaatgggca gacccgaaag catgcccttc tggcttacac 480  
 ctgggtgtga aacaacctaa tggccggggt taccaaaatg ggattccact ggaccaccta 540  
 cagccagaag agatntgaag gaaattntt 569

<210> 767  
 <211> 580  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(580)  
 <223> n = A,T,C or G

<400> 767  
 acgaagctac ccagggagat ctgaatgatg ctaaaaataa acagaaattt gttttaaagg 60  
 tccaaaagcc tgccaacccc tgggaattct acattgggac ccagttgatg gaaagactaa 120

agccatctat	gcagcacatg	tttatgaagt	tctattctgc	ccacttattc	cagaatggca	180
gtgtattagt	aggagagctc	tacagctatg	gaacattatt	aaatgccatt	aacctctata	240
aaaatacccc	tgaaaaagtg	atgcctcaag	gtcttgctcat	ctcttttgc	atgagaatgc	300
tttacatgat	tgagcaagtg	catgactgtg	aaatcattca	tggagacatt	aaaccagaca	360
atttcatact	tggaaacgga	tttttggaac	aggatgatga	agatgattta	tctgctggct	420
tggcactgat	tgacctgggt	canagtatag	atatgaaact	ttttccaaaa	ggaactatat	480
tcacagcaaa	gtgtgaaaca	tctgggnttt	caatggtgtt	gaaaatgctc	ancaacaaac	540
catgggaact	accagaatcg	attacttttg	ggttgctgca			580

&lt;210&gt; 768

&lt;211&gt; 355

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 768

ggcaggtacc	ctatggccta	tgttgactat	aagactgtgc	tgcagattga	tgataatgtg	60
acgtcagccg	tagaaggcat	caacagaatg	accagagctc	tcatggactc	gcttgggcct	120
gagtggcgcc	tgaagctgcc	ctcaatcccc	ttggtgcctg	tttcagctca	gaagagggtg	180
aattccttgc	cttcggagaa	ccacaaagag	atggctaaaa	aaatccaa	agaaaccaca	240
gctacaaaga	acagagtgcc	ttctgctggg	gatgtggaga	aagccagagt	tctgaaggaa	300
gaaggcaatg	agcttgtaaa	gaagggaaac	cataagaaag	ctattgagaa	gtacc	355

&lt;210&gt; 769

&lt;211&gt; 611

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (611)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 769

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gcagggaccc	ccttatagat	gagtggaaaa	gcctgacctc	tgatgaagtc	atcagctttg	120
tgccaccacc	ccttgaccaa	gaagagatgg	agtcctgagc	acctggtttc	tgttctgttg	180
atcccacttc	actgtgaggg	gaaggccttt	tcacgggaac	tctccaaata	ttattcaagt	240
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gtgttagtgt	gtgtgcatgt	gtgtgtctgt	ctttgtggga	gggtaagaca	atatgaacaa	360
actatgatca	cagtgacttt	acaggaggtt	gtggatgctc	cagggcancc	ttcacccttg	420
ctcttctttc	tgagaagtgt	gcttaaggca	gaccaaganc	tgetggccct	tttaagggaat	480
atgttcaatg	ccaaaggtaa	aaaaattntg	aaattgggtc	ccaaatnccc	gggcattgcc	540
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nttgacaacn	n					611

&lt;210&gt; 770

&lt;211&gt; 508

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (508)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 770

ggacaaaacc	agctgaagat	gaaagtgtgg	agaccaggt	gaatgacagc	atcagtgtctg	60
agacagcaga	gcagatggat	gtagatcagc	aggagcacag	tgctgaagag	ggttctgttt	120
gtgatcccc	acccgctacc	aaagctgact	ctgtggacgt	tgaagtgagg	gtgccagaaa	180
accatgcac	ttaaagttgaa	ggtgataata	ccaaagaaag	agacttggat	agagccagt	240
agaaggtgga	acctagagat	gaagatttgg	tggtagctca	gcaaataaat	gccccaaaggc	300
ccgagcccca	gtcagacaat	gattccagt	ccacgtgcag	cgctgatgag	gatgtggatg	360
gagagccaga	gaggcagaga	atgtttccta	tggtactcaa	gcctttactg	ntaaacccca	420
ctggatctat	actcgnctca	tcttcggtn	aaacccaatt	cncgtgggatc	tggtcccaant	480
tnancattna	ncttgggnta	ttncnncc				508

&lt;210&gt; 771

&lt;211&gt; 587

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(587)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 771

acttgttttg	ggaatatatg	agagaagaaa	ctgtctgagca	ggtcagttaa	gaacagtcca	60
tttcagctgc	aggacagttc	tctttcccg	gacaagccta	catagcctcc	aaggagagcca	120
aactatccct	tccatgcaac	aagacacctt	gcatggatac	tctagccatg	acttgccttt	180
ggacaaaaat	caactgctaa	cgtttttcat	ctctaataatc	attaacacca	tgagaaaaa	240
agaaaaaaat	tcaaccctag	aaaacttgac	aacgagaata	agaaaatcca	caaggaaagg	300
tcatgctaaa	actgatttga	cagttgttcc	atcacgcct	accacatggg	cttgagactg	360
gtgacttcat	ggatgcaccc	cttcgatgcc	ctgccaaatg	tcagcttcaa	gtctgtcagt	420
gacccagtg	tgatgctgcc	tgcttcttat	tcaccaactn	ctattcaaga	gatccaaggg	480
ggccttgggc	cgtggtaagc	acanggacac	ncaggtgcc	agaagcccca	gnaacccttt	540
tagaaaaactt	tgncctggga	tttgggcccc	ggnaaccaac	cngtggn		587

&lt;210&gt; 772

&lt;211&gt; 577

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(577)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 772

ggtacactgc	aggagagtgc	ctggcaaaaa	gatcaaatgg	ggctgggact	tctcattggc	60
caacctgcct	ttccccagaa	ggagtgattt	ttctatcggc	acaaaagcac	tatatggact	120
ggtaatgggt	acaggttcag	agattaccca	gtgaggcctt	attcctccct	tcccccaaaa	180
actgacacct	ttgttagcca	cctccccacc	cacatacatt	tctgccagt	ttcacaatga	240
cactcagcgg	ccatgtctgg	acatgagtgc	ccagggaata	tgcccaagct	atgccttgct	300
ctcttgctct	gtttgcattt	cactgggagc	ttgcactatg	cagctccagt	ttcctgcagt	360
gatcagggtc	ctgcaagcag	tggggaagg	ggccaaggta	ttggaggact	ccctccagct	420

ttggaagcct	catccgcgtg	tgtgtgtgtg	tatgtgtaga	caagctcttn	gctctgtcac	480
ccaagctgga	attgcantgg	tgcaatcatg	gttcacttgc	agtcttgacc	ttttgggtca	540
agtgatcctt	ccacctnacc	tcttgagtac	tgggacc			577

<210> 773  
 <211> 580  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(580)  
 <223> n = A,T,C or G

<400> 773						
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taatcagcca	ccttcagaca	taaagccaga	cggaagttct	cagcagttgt	caacagttgt	120
tccgtccatg	ggaactaaac	caaaaccagc	agggcagcag	ccgagagtgc	tgctatctcc	180
cagcatacct	tcggttggcc	aagaccagac	cctttctcca	ggttctaagc	aagaaagtcc	240
acctgtgtgt	gccgtccggc	cctttactcc	ccagccttcc	aaagacacct	tacttccacc	300
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ggcgccagga	aaaaacttca	gcaggctgtg	cagagcgcgt	tgaccaagac	tcataccaga	420
ggggccacct	tttcaagtgt	atatggtaag	cctgttaattg	ctgntgncca	aaatcaacag	480
cagcaccacg	agacatttat	tcaatagcca	gggcaagcct	ggcagtcaga	acctgaacag	540
acctgttctt	tagttcagga	gaaccttgaa	acnaaagaat			580

<210> 774  
 <211> 680  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(680)  
 <223> n = A,T,C or G

<400> 774						
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ctaaactggg	gagttttctc	caaagtggg	aaaggatggg	aagagtaggt	gggaatgggg	120
aagttacaca	gctacagcag	tcaggcctgt	ttagtaagaa	gaatcacatt	taatgagttt	180
ctttcttgca	gtttcagatg	ctcaagtaca	agtaagttat	atgacaacga	taacacacag	240
gaggaaagcc	acggaagcac	actjttgtga	agttctcatg	ctctacgtga	agtgttatct	300
tttttttcta	agtgcagca	agttttattaa	gaaagtaaaag	gaataaaaagg	aatggctatt	360
tcattggcag	agcaccaata	aaatcatctg	aaggngagatt	gtgatgagtt	aaangcgtat	420
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caagggaatt	aacttgaatc	attaaaaatt	cttaatctgg	gggaaccttt	naanaanggg	540
agcttaccct	ttggggcaat	ttnaaacena	aagccagggt	gattgaattt	aagcttacct	600
tttttcaata	atccctttta	aannaanggt	ttnaaccttt	cncttaaang	gcnnnanttt	660
tcnaattgga	ntttaagccg					680

<210> 775  
 <211> 658  
 <212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(658)

<223> n = A,T,C or G

<400> 775

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aattcctgcc	tttctaaatg	tggtggatat	tgctggcctt	gtgaaaggag	ctcacaatgg	120
gcagggcctg	gggaatgctt	ttttatctca	tattagtgcc	tgtgatggca	tctttcatct	180
aacacgtgct	tttgaagatg	atgatatcac	gcacgttgaa	ggaagtgtag	atcctattcg	240
agatatagaa	ataatacatg	aagagcttca	gcttaaagat	gaggaaatga	ttggggcccat	300
tatagataaaa	ctagaaaaagg	tggtgtgtgag	aggaggagat	aaaaaactaa	aacctgaata	360
tgatataatg	tgcaaaagtaa	aatcctgggt	tatagatcaa	aaagaaacct	ggtcgcttct	420
atcatgattg	gaatgaccaa	gagattgaag	tggtgaataa	acccttaatt	ttgactcnaa	480
anccatggnc	tacttggtna	acnttctgaa	aaagcttcnt	ttgaaggaaa	ccaanggtga	540
taaaattaag	aaggggtggc	cagtttancc	agggccttgg	catcctttaa	gggggcttgg	600
accttaagt	ccanaattga	tcttanggna	anccaagttt	tggaaccacc	tgncccaa	658

<210> 776

<211> 659

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(659)

<223> n = A,T,C or G

<400> 776

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gtaatagaac	ctctgaaaga	ttttcataaa	gatgaagtga	gaattttggg	cagagaactt	180
ggacttccag	aagagttagt	ttccaggcat	ccatttccag	gtcctggcct	ggcaatcaga	240
gtaatatgtg	ctgaagaacc	ttatatattgt	aaggactttc	ctgaaaacaa	caatatatttg	300
aaaatagtag	ctgatttttc	ttgcaagtgt	taaaaagcca	cataccctat	tcagagagtc	360
aaagcctgca	caacagaaga	ggatcaggag	aagctgatgc	caaataccag	tctgcattcc	420
tgaatgcctt	cttgctgcca	attaaaactt	naggtgtnc	nggtgaactg	gnngtntctac	480
cgntnccngn	ngnggaatnt	caggnaaaga	tgaaccctgc	tgggnaatcn	cttattttcn	540
ggntangnnt	aaaccttnga	tggggccaac	cttaccnggt	ggttattttt	tggnccccc	600
ntaaagaacc	tcntnaaang	tnccccnttt	ttganacggg	ggnttaaacc	tnccccggg	659

<210> 777

<211> 728

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(728)

<223> n = A,T,C or G

&lt;400&gt; 777

acttcttgca	tgttgtcaca	tgttgctgtg	agaatcaggt	gctgcctata	tggctccact	60
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tccctttgct	gatcttaatc	tctgtccttt	tactgtataa	aactgtaact	gtgagcctaa	180
cagctttcct	gagtgtagtg	agtcctttcta	gcaaatgaaa	ggaggggtgg	cttggagacc	240
tatgaacttg	cacctgcccc	cgtcgttttg	agggctctggc	acaggggagg	gaagggctgg	300
gcctcttttg	gaaggggggc	ttcaatccat	ttgggggtcg	gggtcccaac	ttcttggang	360
ggcccaacgt	tccttgccca	gcttccaagn	ctcttcttcc	cttcttaagt	ccccgancct	420
tgcaaccttt	gggccccnt	ggcttggtga	atcctgggaa	aaaacttngt	ctttttnttt	480
ancacttgaa	tnngaanaac	tggcccatata	actnaagccc	ttgcatnnct	tngactnctt	540
nnatgggcaa	ccttnaaggg	attcccaagg	gnccctggg	tttanggaaa	taatgggggg	600
aaaatttttt	nggaanttna	anaataancc	ccccccaaaa	ncggggganc	cttngggccc	660
gnaaccccc	ttaaggccn	aaattccngn	canatntggg	ggggccggtg	ctaaggggat	720
cccaaccc						728

&lt;210&gt; 778

&lt;211&gt; 603

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(603)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 778

caggtacact	gctgccactg	ttgtgtcttc	gctctgcttg	ctggtgcttc	acgccaggcc	60
ccgtcctgcc	gtgacaccct	tcctcctacc	cttggaaacc	caaggccaag	ttgggtcaaa	120
ctgttgagga	acagagttgg	cctgcatctg	gaacacactt	gtcctcagct	taccatctcc	180
tcacacccca	gagtggaag	gtgaacacct	gcagctgagg	cttggaaacg	tttcttgtgt	240
tgccttgaaa	aatctttgag	acctcaggga	ggctctgtct	ctcttaaaag	gtggagaaaag	300
atgccattct	ctccctaagg	tctggtggag	tctcccatc	ttgcataccc	ttctgcaagc	360
catctatctc	tgtcactctc	ccaattgacc	cgctcgggaa	caagggatga	aggaggaagt	420
tgggggcttg	ggggaatcct	gccagttggt	gaancctgtg	gcangaagga	tatgtgacnt	480
agagatcctg	atctttntn	ancctgctgt	tggttggctt	gnatatatgg	atgggtgactg	540
tttgnaaagn	ggagtataag	atgcctgct	gatngngta	tgctatgctn	ttangatgga	600
ctg						603

&lt;210&gt; 779

&lt;211&gt; 654

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(654)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 779

cgaggttttt	tttttttttt	tttccagtta	gtgatgtcgt	atttcaaaat	aggctgaaac	60
ttcagagaaa	tgaaaatcgg	gatatacgtg	aagttattgc	tctcggtgtt	cctaatactc	120
ggacttccaa	tgaagttcag	tatgacccaa	ggctnttcaa	ccaatccaag	ggtatggaca	180
gtggatttgc	aggtggagaa	gatgaaatth	ataatgttta	tgatcaagcc	tggagagggtg	240

gtaaagatat	ggcccagagt	atttataggc	ccagtaaaaa	tntggacaag	gacatgtatg	300
gtgatgacct	agaagccaga	ataaagacca	acagatttgt	tcccagacaag	gagttttctg	360
gttcaaaccg	taaacngaga	ggccgagaag	gaccagtgca	gtttgaggaa	aatccttttg	420
gtttggacaa	gtttttggaa	aaaacccaac	ngcatggngg	ctntaaaaga	cccttagata	480
ccacccgcnc	aaggacnnag	cctgaagcca	gaaaaggngg	aaggattggc	caggttttcc	540
aagngaattga	ctttanccta	acctaangag	ccagnttngg	ggacccttnt	aaagggccgg	600
taaaaccnat	ttgggggceca	nccnccttn	ttttttctgg	gaaanggggg	gtta	654

<210> 780  
 <211> 570  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(570)  
 <223> n = A,T,C or G

<400> 780						
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atcagcattt	caaccgactt	agctacttta	cacagtccca	taaagcagcc	accagtgaca	120
gccaacaggt	tgacaatcag	cattgaattg	cgcctgccaa	agcggttgac	gaagagtccg	180
acggaaaagg	agccgatcat	acccngacg	gaaaatatgg	ccacagacaa	ggaccagaga	240
gacgtgagca	gcacctcaga	gggtggggca	tttcccttgc	cgtcaaagtt	ttattgataa	300
attcctttat	gatcttctca	ggagcattga	tgaccccgat	ggttgtaacc	naattggaaa	360
gaaccgattg	nagccactgg	tgatggccaa	tatcaaanct	ggggtgacct	tctggggccc	420
catcgctgga	atctaattca	agtctttaag	aaagatctan	gggtgatttc	agaaacnagn	480
ttttnaggcc	acaaaccttt	aaanggcctt	ttaacagcaa	ggtttnttcc	cgtcttagga	540
aggatncnaa	ncnttggcc	ggaaccncct				570

<210> 781  
 <211> 664  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(664)  
 <223> n = A,T,C or G

<400> 781						
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atttgcagtc	gtcactgggg	ccgtttcttg	ctgcttat	gtctgctagc	ctgctcttcc	120
agctgcatgg	ccaggcgcaa	ggccttgatg	acatctcgca	gggctgagaa	atgcttggct	180
tgctggggca	gagcagattc	cgctttgttc	acaaagggtc	ccaggtcata	gtctggctgc	240
tcggtcacat	cagagagctc	aagccaagtc	tggctcctgc	tgtatgatct	ccttgagctc	300
ttccatagcc	ttctcctcca	gcttcctgat	ctgaagtcac	ggctttcgtt	aaaactggac	360
atctgggaaa	gacagtcctt	ctctttcttg	gataaattgg	cctggaatca	ncgccccggt	420
aaaacaagct	ttcatctttc	tggttccant	ttnattaact	ggttttcact	nggnccactg	480
ngggggctta	ncttcttgac	ctggctggna	aatttaagg	ggttnaagnt	tnntncccgg	540
acctattncn	tggnnaaaaa	cnyygaatna	tgcnagnctt	aaaattttnc	ccaangaagg	600
agtccttaan	accnggntaa	nttggnttta	cggaaacngg	tggnnacctt	gttttnccag	660
gncc						664

<210> 782  
 <211> 669  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(669)  
 <223> n = A,T,C or G

<400> 782  
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 gtcatttcta tttccttggg tatgaacaaa ggtagcaaag tgcagttgta tcagcagtg 120  
 caatagaaat tacagagttt ttcatatccc tttacagttt gccacaggta tcttaaaata 180  
 ttgnttacac tcatctctct tcagtttacc attgtttaat aggcctaccc tcgatctttt 240  
 tattcaatat gttaataaaag aaacctatac acatagtatc accgttatca ttttaaaaat 300  
 attttgacac tgnatataaa tataactagc ttactttgga atcctaccta ttttaatggg 360  
 gnatgaaaat attattctga aattagccng gcntggnggt gcatgcctan aggccagct 420  
 acttggggaag ctttaagggg aaggatccct gaacccaagg gangggccang nttnngggan 480  
 ctnggatgnn caatggcttc ancctnggna atngaattgg ancccttttt aaaggaaagg 540  
 aaanggaaat ttggattttg gnaacngann cctggnccaa aaaagggcaa aanccctgct 600  
 ggaangggcc tntggacctt aaatgccccn nccaaangng gnnattncca ttttaannngn 660  
 cccncaggg 669

<210> 783  
 <211> 735  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(735)  
 <223> n = A,T,C or G

<400> 783  
 acacagaagc agtgaaggac tgcacagaag ccctcaagct ggatggaaag aacgtgaagg 60  
 cattctacag acggggtcaa gccacaaaag cactcaaggga ctataaatcc agctttgcag 120  
 acatcagcaa cctcctacag attgagccta ggaatgggtcc tgcacagaag ttgcggcagg 180  
 aagtgaagca gaacctacac taaaaacca acagggcaac tggaaacctt gcctgacctt 240  
 acccagagaa gccatgggac acctgctctg tgcccgtctc tgaaacctag catgccccaa 300  
 gtgagctctg aagccccctc ctcaatccct tgatggcctc caccctgtaa gaagctttgc 360  
 tttgggtcaa ttaaaactta gtgtaatcaa accccagacc atgggtgggt gcacccagaa 420  
 agggncacc tnaaaccta aacgttgaa ctgnaacttt ngccccaat tcccnaagcc 480  
 caagttagct tgatccncc accggaatcc ttatttagcc aaagccnttt ngggntttgg 540  
 nctgggnccc aaanggggct ttgaaaaact ggaaggcttg gcccnttgg agctttnccc 600  
 caaaancccc aaatttaatt ggggagntna ttttggaaac aaccttgggc ttttngggc 660  
 cccgggtttg gaaaggaagg ggggataaaa ccttaagggc cctggttcca aaannanccc 720  
 tttttnaacc ggggn 735

<210> 784  
 <211> 660  
 <212> DNA



&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(660)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 784

cgagggtacac	attgtattat	atacaaacaa	gcaacaacaa	aaagtttcat	catgtaaaca	60
aaagaatata	aattatagac	ataattggaa	gtttcaaaca	gtccttaa	cattgtgagc	120
ttctctaaaa	ggcacaggtc	ttggagtgtg	ggcacagagc	cattagtcag	atgtctgggt	180
gggtctcccat	aatagcaatg	tatactctaa	agtgggcttt	ttgtgaactc	tgtcagggtg	240
aatgagttag	gcctcttaaa	ggaatgaaat	gctttcacat	ttggggcaac	aagtgaaaaa	300
tactgaaagg	agggatacaa	ctagggttag	atttattggg	gacagtgatt	ttagaaatac	360
cactaaaaag	gtggtaaaaag	atttctagat	taaattctga	ctactgnaaa	tnagaaagga	420
tcctttttna	nctctaccaa	tggttngtga	aaaattaaaa	gggagaaaag	gacccaggag	480
aaaccnaatt	gggaagctan	ggagggtcca	gaaaatnccc	agtcttacac	gaaaaaacct	540
tganagggcc	tttttaaggc	caannttggg	aaattacctt	tgtaacttaa	cttgaaaaan	600
acctgcccgc	ggccgttnaa	aggncaattn	accnctggng	gccgtcttag	ggnccnccctc	660

&lt;210&gt; 785

&lt;211&gt; 254

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 785

actgctgctg	gttaagggtca	acctgggggtg	caatgctgct	gtcttcatct	tcgggtcccga	60
agtaatgctc	aataagatca	aaggccctttt	ggtagatctc	ctggttttca	tgactctgta	120
agaactcaat	tttatccaga	ccataagctt	cttcaatcaa	agcacagtaa	gggttaaatgc	180
cagtgccatt	ccttttggct	tcctgttctc	caagcctcag	gatattttcc	aagccattta	240
gggcaacctg	tacc					254

&lt;210&gt; 786

&lt;211&gt; 688

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(688)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 786

ggtactggct	gagctggaag	tgccaaaaag	cactcctggc	tgcttctggg	tccatctgat	60
gatgatgtga	cacacactgc	tgaaaaggcc	caagcagggc	aaagtgggatg	gctgaaggag	120
ggaaggaggg	ggttcagaac	ccactggcct	ggatgggaga	actgggtgga	ggcttcccca	180
agagggaaga	cagataaaca	aaacaaaaca	aaaactgggt	aaagaggaat	gaatcactca	240
gccctgatgt	ttcaattcta	cactgcattc	ctggccagtc	gcatttggtt	aatgcaggca	300
tgccacagc	tctcctagag	aattatctca	aagaccaga	agggacctgg	angaggccta	360
tttcttaagg	ttttccagtt	ggaccaaggg	aangantggg	ttcacttagc	ttctaaaaaa	420
ggntttgaac	cctaagggtta	actgcctccg	gaagctgctt	gcttttgggt	tggttcccca	480
aaaaggnttc	agaatagntt	tggaccctt	anggaaactt	ggatcaagcc	cgnaaancca	540
anacttnctt	ggtngnaaaa	tcaagggggg	ctncttgggg	nttanccgga	agtttgggnc	600

aggntgtntt aacaggggtgg ggantgacca nccnggngcc caggggcctt antaacnttg 660  
ggaancccct gnganggaan ccttnacc 688

<210> 787  
<211> 708  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(708)  
<223> n = A,T,C or G

<400> 787  
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atatggacta catggagatc atatcctgta gtgtagtgaa agctaagtcc tcaagagcca 180  
tatgtataga tacacaatgt tttttaataa tctttaaaac agagatcaaa gttcatttaa 240  
gtcctgtttg cattaacaaa aataaaaaatg aaataaaaaat gggaaccaa tggatcatct 300  
aaaaggttta aaaattccta aattgnccaa tttatccaac tgggtgggaga ctttaattcag 360  
ggttttggaa agtccaggac tggtttcagc tgaaccacaga aggcccccaa ttttgcttac 420  
tggaactggc cctgggggtaa gncatggaat taaaatngct tancnccttc cctnnggttt 480  
tgaacttttg gccggttnga attattgggt aaaggcaggc tttaaaccaa gttnccaac 540  
ctgggctatt taacttggat cccattggga aaaattttca aanggaaatt ttttattagg 600  
ggccatttca atcnaangga aaattntggg aacttgyyaa atnccgantc cttgntggaa 660  
anaaaaaacc cnggggaaat gggngggggg nccttnggcc cccaacc 708

<210> 788  
<211> 647  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(647)  
<223> n = A,T,C or G

<400> 788  
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tcaccaaata actgcttggt cccactgaa gcagtgtagc tctccatagt atttttgggtg 120  
ggtatggatt acatgtgtgg ccagctcatg ctttttcttg agcaggggct gtccatgacc 180  
tgtgtcata ccatgctttc taagtctct tggacaggc cctcagctgc tgcctcagcc 240  
tgagtttcag aggggtgtgta ggagtcctgg taatcttgaa gcagtttgac cacctccaaa 300  
tggttgaact gcacagcatc atccagggga atggtgcca cctgtccttg gcaaaaggat 360  
tcactttgca agccttgatc aggaatttaa caacttcgaa tgtgccctta nctgcagcaa 420  
catgcnaanc tgggcnccaa gcataagctt tctgggtccat atccatggct gacaaggcaa 480  
cctttnaana ncttancatt ggcncntnn gcncaaata ccaggtggcc nnagcttggt 540  
cccaattntg gccttacncc cggggntaan tccaaccaan gccttaggtt caaatnngga 600  
aattgaanan accccacttt ggcaaaactgg cccctnnggt gncccat 647

<210> 789  
<211> 650  
<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(650)

<223> n = A,T,C or G

<400> 789

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acaaagagat	cgtgcaggac	ggtgaccata	tgatcatccg	cacgctgagc	acttttagga	120
actacatcat	ggacttccag	ggtgggaagg	agtttgagga	ggatctgaca	ggcatagatg	180
accgcaagtg	catgacaaca	gtgagctggg	acggagacaa	gctccagtgt	gtgcagaagg	240
gtgagaagga	ggggcgctggc	tggacccagt	ggatcgaggg	tgatgagctg	cacctggaga	300
tgagagtgga	agggtgtggtc	tgcaagcaag	tattcaagaa	ggtgcagtga	agcccaggca	360
gacnaccttg	tcccaaagga	atcagcaagg	atgtgtgggc	caagatcccc	ctntttgccc	420
agcatgaggc	aaaaatgtnc	agccacccca	ggctttntta	acanagctgg	ctcttggttt	480
tggcactttt	ccttttctta	aacaaacctg	ccattaagng	anttgggggt	caaaaaaaaa	540
aattntnnna	naataaaaaa	ttttntctt	cgcaccncct	tnnggggaaa	cncnantgng	600
gcggtntntt	ggancnctnn	tcncnttgg	gnntangtat	aatntttttt		650

<210> 790

<211> 646

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(646)

<223> n = A,T,C or G

<400> 790

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gcgccctttc	ctcatcatca	aggatcagga	ccgcaagtc	cgtcttatgg	gacttgaggc	120
cctcaagtct	catataatgg	cagcaaaggc	tgtagcaaat	acaatgagaa	catcacttgg	180
accaaattgg	cttgataaga	tgatggtgga	taaggatggg	gatgtgactg	taactaatga	240
tggggccacc	atcttaagca	tgatggatgt	tgatcatcag	attgccaaagc	tgatggtgga	300
actgnccaag	tctcaggatg	atgaaattgg	agatggaacc	acaggagtgg	ttgtcctggc	360
tgggtgccttg	gtagaagaag	cggagcaatt	gctanaccca	ggcattcacc	caatcagaat	420
annccatngc	tattaacaag	ctgnttcccc	ttgctattga	acactggaca	agaacaacga	480
taccnccttg	gtgacttaan	ggcaccgaac	cctgattaaa	ccgnaaaccc	cnctnggttc	540
aagnggnaca	gttgcncccc	cnatngttaa	atctggangc	cgcctnttgc	ccanttgga	600
ggaaacntta	tttgctttca	attaaggcaa	tggccgcagn	tgagan		646

<210> 791

<211> 656

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(656)

<223> n = A,T,C or G

```

<400> 791
accatgatat ctggcagatg tataagaagg cagaggcttc cttttggacc gccgaggagg      60
tggacctctc caaggacatt cagcactggg aatccctgaa acccgaggag agatatTTta      120
tatcccatgt tctggctttc ttgcagcaa gcgatggcat agtaaatgaa aacttggtgg      180
agcgatttag ccaagaagtt cagattacag aagcccgtg tttctatggc ttccaaattg      240
ccatggaaaa catacattct gaaatgtata gtcttcttat tgacacttac ataaaagatc      300
ccaaagaaag ggaattttct ctcaatgcca ttgaaacgat gccttgtgtc aagaagaagg      360
cagactgggc ccttgcgctg gattggggac caagaggcta cctatggtga acgtgttgta      420
acctttgctg cntggaaggc atttcttttc cggctctttt gcgatattc tggcttaaga      480
aacgaggctg agcctggcct acantttcta angaacttat taccganatt aaggggtacn      540
ctgggatttg cttgcctgaa gttnaacccc tgggacctng gccgnacccc ntangggcaa      600
ttccanccac tggngggccg tactaaggga accaacttgg gcccaacntg gggnat      656

```

<210> 792

<211> 640

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(640)

<223> n = A,T,C or G

```

<400> 792
ggtctgacac aatcagaaat tcgagacatc atcctgggta tggagatctc ggcaccgtca      60
cagcagcggc agcagatcgc tgagatcgag aagcagacca aggaacaatc gcagctgacg      120
gcaacacaga ctcgcactgt caacaagcat ggcgatgaga tcatcacctc caccaccagc      180
aactatgaga cccagacttt ctcatccaag actgagtggg gggtcagggc catctctgct      240
gccaacctgc acctaaggac caatcacatc tatgtttcat ctgacgacat caaggagact      300
ggctacacct acatccttcc caaagaatgt gcttaagaaa gttcatctgc atatctgacc      360
ttcggggccc aattgcagga tacctatatg gggtgagccc accagatacc cccaggtgaa      420
agagatcccc tgcatttga tggtgcccc aatggggcctt accanaacgn gcacctgctg      480
gcaantgnct aactgagacc tgcccggcgg ccgttcaang gcaattcngn nactggnggc      540
cgtctaaggg accnacttgg gccaaacttg gnaatatggc nnactggtcc tggggaatgg      600
tntccgtcca ttcccanttc anccggaanc taanggtaac      640

```

<210> 793

<211> 615

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(615)

<223> n = A,T,C or G

```

<400> 793
acctacaact atatctactc cattttccaa aacagagagc tgatcccggg ctgcaacacc      60
tccaattatc agaagctccc ttaatttagg attatcaatg tatttcttaa actgcttgat      120
gttattcaaa gtttgttcag ctaactcccc ggaagggttc acaatgagag ctttcggagc      180
attggggaga aactttgttt gtgtcacctg tgcatfacct gagtgtgtg atttgacaat      240
gtaaccatcc ggtgccttgg aaagagcaac aaagccatct tttggtggaa acttaaattc      300
ctcttcaccc gaagttaaatt ttcagttcag cattcttcaa aacacaggca ggaaagaggg      360

```

cttggttttt	catatgtggt	ggtattttcaa	atgccagacc	aaganctttt	ccatttttgg	420
agaacttgac	atgtccttat	ctatatcnng	tacatccatg	ggatcatgcc	tagngaattc	480
tttcataata	tcaaattggtg	gtatggaaatc	ttcctgtccc	caagccaatc	caactggaga	540
ccttggcggc	ccntanggca	atcanectgn	gccgctaggn	ccactggcca	ctggnacagg	600
cnntgtctgg	aatgn					615

<210> 794  
 <211> 709  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(709)  
 <223> n = A,T,C or G

<400> 794						
acttctgaat	aagttcagag	ccaaccactc	tcaagaaagt	ggctgaggtt	tggtttgcta	60
ctgctttggc	taacaaagt	ttacctgtgc	caggtggacc	atagagaatg	accccttag	120
gaggctttat	acccatctct	tcataatatt	caggatgggc	gagaggaagc	tccacagatt	180
ccctaatttc	ctgaatttgg	ttgtccaacc	ccccaatatc	tgcataagtc	tcctgggggg	240
ccttttctac	cttcatcact	gtgaccaggg	gatccgtgtc	atccatcagc	acccctatca	300
cggnatgcac	cttgttgggtg	agcaggaccg	agcagccagg	ttccagcaga	tccttgctac	360
aaatgaaaaga	atgctgacgt	antgttctga	gcccacagat	gtagacacga	atggcatgat	420
ggcatcaatg	atctctttcc	aaggttccta	ctgacatcgg	ggtccccctc	agaatcatcc	480
acttttggat	ctttccttcn	tcttgnnttt	ccttctaaag	gggttcaatt	tggttccccg	540
atttcttaag	ngaattcttc	cttncnttga	aaaaaaaaag	gccnttnaaa	tnctntttta	600
acctttangn	aanttttaaa	cccgggcctt	gaattnnnaa	ggggggcnccc	cngggggcaa	660
ttttncttgg	cnnnaatttg	gggccccctt	gggnntnnnt	ttttttttt		709

<210> 795  
 <211> 693  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(693)  
 <223> n = A,T,C or G

<400> 795						
ggtacggcaa	tcaatcttaa	taatccagag	agccagtcca	tgcatttggg	aaccagactt	60
gttcagctgg	acagtgtctat	cagcatggaa	ttgtggcagg	aagcattcaa	agctgtggaa	120
gatattcacg	ggctattctc	cttgtctaaa	aaaccaccta	aacctcagtt	gatggcaaat	180
tactataaca	aagtctcaac	tgtgttttgg	aaatctggaa	atgctctttt	tcatgcatct	240
acactccatc	gtctttacca	tctctctaga	gaaatgagaa	agaatctcac	acaagacgag	300
atgcaaagaa	tgtctactag	agtcctttta	gccactcttt	ccatccctat	tactcctgag	360
ccgtacatgt	gcataggaac	tgggatatac	acaggcacag	ggataggcac	tggaacatat	420
tctgnctnca	agtatcatct	gctgaccaag	aattggntctg	catgtgaagg	ttacagtaag	480
tacttttggc	attggtaaan	ggttgcaaaa	aaactgnttt	ggnccttnan	cnctttggta	540
aggggttggg	aaaaggggtg	gggcttaaac	ctggcanttt	nggttcnana	agtntggaaa	600
ncctggganc	ttaagggaag	gttttttangg	gcntttttga	aatggcaatg	tgggcncaat	660
ttggtggccc	gtnaaaaccc	cntanncaag	gtg			693

<210> 796  
 <211> 452  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(452)  
 <223> n = A,T,C or G

<400> 796  
 ggtacattca cgtctcccgg ccgcttcacc tgaaagccat cggctctcctg ggtagtggcg 60  
 gtcctgtgcc attctaccag atggttgtct ggcccatata ggtctttgtc cagttcaatc 120  
 accaaggatt taaaaaagga agagaacttc ctcttttggt tagtggcatc atatttggac 180  
 aaggctgaat cctccaggag ccgtccttct acccgaagct cccagggaagc caccgtccct 240  
 tccccatcct cggcatctga cttagccgga ttgaaagtgt tagaaatgaa aattcgcagc 300  
 ttccgttttt gcttgatggg acgtttcaag gcctcttgga tatctagccg ttccctcatga 360  
 tagtctggtc cagttccttt caaaagccaa gagatccata taggcctggg attctggtac 420  
 ctgccnggcc ggcgctcnaa nggccaattc aa 452

<210> 797  
 <211> 333  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(333)  
 <223> n = A,T,C or G

<400> 797  
 ggtacaagct tttttttttt tttttttttt ttttttatta ngcgcaagtg gtcaaaagtt 60  
 gtcaaaattg tcctcattcc tcgattgtct cttttttacc agtctcttgc ccttcaaaca 120  
 gaggatacct ggcctccaca tcagcccatg tgatgttgcc attggctagg tcttggacta 180  
 tgctgggcag ctgagagatc tctgctctta tctgccgcag tgagtcacgg tccctcagag 240  
 ttgcagtgtg ggggggtctt ttcactgtgt caaagtcagt ggtgacacca aaagccacgc 300  
 caatctcatc aagtcctggc atancgcctt ccg 333

<210> 798  
 <211> 632  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(632)  
 <223> n = A,T,C or G

<400> 798  
 ggtgcttttt tttttttttt tttttttttt tttttggaca cagatcactt tattggcatg 60  
 gctttgtttt aagaaaagga aaagtgcaca agccaagaga cagactctgc taacagatgc 120  
 ctgggggtgg ctggacattt ttgcctcatg ctgtgcaaaag agggggatcc tggccacac 180

atcctgctga	ttccttggga	caaggttgtc	tgccctgggcc	tcantgcacc	ttcttgaata	240
cttgcttgca	gaccacacct	tccactctca	tctccagggtg	cagntcatca	ccctcgatcc	300
actgggtcca	gccacgcccc	tccttctcac	ccttctgcac	acactggagc	ttgnctccgc	360
cnagctcact	gntgcattgca	cttgcgcat	ctatgcctgn	caaatacctcn	ttaaactctt	420
tnccaaacctg	gaagtncatg	gatgtagtcc	taaaagtgt	ancgngccga	tgatcatatg	480
gncaccggnc	tnaccnact	tttggctggc	ttancaaagt	gcaattgcnn	aggccattga	540
cttaggcnc	agtcttcccg	gcgcctnaa	ggcaatcncc	attggcggnn	tctagggncc	600
nntggncagt	tggtnatngg	caantntcng	ga			632

<210> 799  
 <211> 462  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(462)  
 <223> n = A,T,C or G

<400> 799						
ggtagctgct	ctgtttttgt	tacccacaaa	ggaccagcgc	cagatgttct	ttgtgatcag	60
cctggatccc	ccaatcaagc	aaggccaaac	tcgctaccac	ttctgatcc	tcctcttctc	120
caaggacgag	gacatttctg	tgactctgaa	catgaacgag	gaagaagtgg	agaagcgctt	180
tgaggggtcg	ctcaccaaga	acatgtcagg	atccctctat	gagatggtea	gccgggtcat	240
gaaagcactg	gtaaaaccgca	agatcacagt	gccagggaaac	ttccaagggc	actcaggggc	300
ccagtgcatt	acctgttctc	acaaggcaaa	gctcaggact	gctctacccg	ctggagcggg	360
gcttcatcta	cgccacaaaa	gccacctgtg	cacatnccgt	tcgatgagac	tcctttgcaa	420
cntttgtcgt	ggtacctgcc	cggccggncg	ttcgaaangg	cc		462

<210> 800  
 <211> 702  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(702)  
 <223> n = A,T,C or G

<400> 800						
gaggtgtcct	cccctccaag	cagaccacct	gtccccttct	atcccagctc	agagcagctg	60
acccaactca	gaatctcttt	ccttcaggat	gaagtgcctt	ttgaatgtta	ttttaagccg	120
agagttaatt	tttctacaca	acatatttcc	agacatcttt	tagtctttta	ttgtcttaga	180
tactataaga	agatgaacat	gacaattttc	tagaacctgg	tagcgtgtgt	gtgtgtggcg	240
gggggtgctg	agggaggggg	gtgagtcaca	ggagcctgtc	ccccaacagg	tgtgattgct	300
ctgacaacct	gtggcatgct	gcagggtcag	gctcctgata	ggaggatttc	atgactatgt	360
cattgnctcc	actcattttt	gacccagttt	ggaatgtatc	tgcaattggg	gtggctcaac	420
actttaggaa	acaatagaat	tattttatat	aataattctg	atgggtgacca	agtttngnct	480
tggaggggcca	caattttctt	cctttgaaaa	agtggacant	ncctggncac	ttctggnttt	540
ttaaaactta	ctnggccatt	ccattttggg	ggtttttttg	ggnnggtaaa	ttgggttttg	600
gggttaaaaa	cccgttttnc	agggaaaanc	ccctaaaaaa	nccttttggg	gaatttttaa	660
anggaaaaat	tctgggntaa	attngggntt	ttttaaaaaa	cc		702

<210> 801  
 <211> 719  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (719)  
 <223> n = A,T,C or G

```

<400> 801
aggtactgcc cagagaattt tgtagacatc aagaaaactt tggaacgaga gactcgccag      60
tgccaggctc tggatgatctg gactgactgt gatagagaag gcgaaaacat cgggtttgag      120
attatccacg tgtgtaaggc tgtaaagccc aatctgcagg tgttgcgagc ccgattctct      180
gagatcacac cccatgccgt caggacagct tgtgaaaacc tgaccgagcc tgatcagagg      240
gtgagcgatg ctgtggatgt gaggcaggag ctggacctga ggattggagc tgcctttact      300
aggttccaga ccctgcggct tcagaggatt tttcctgagg tgctggcaga gcagctcatc      360
agttacggca gctgccagtt cccacactg ggctttgtgg tggaaccggg tcaaagccat      420
tcaggctttt gnacccttgg ggccgnnaac accttaaggg ccgaatttcc agcacaactg      480
ggcggggcgt tactaagnng gantnccgaa cttngggnan cccaagcttt gggcgtnaat      540
cattngggnc ataaacttgg gttnccttgg ngngnnaaaa ttgggntaat cccggtttna      600
caaatttccc cccccaactt tttccnaaac cccgggaaag ccttttaaaa ggggtnaaaa      660
acccctnngg ggngggccct aaatggagtn ggggncctta accttcnccc ttttanant      719

```

<210> 802  
 <211> 646  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1) ... (646)  
 <223> n = A,T,C or G

```

<400> 802
actcatcgcc attgacctgg cctataactt gcacagtgcc tatggaaact gggtcccgag      60
cagcaagcct ctcatacaac aggccatggc caagatcatg aaggcaaacc ctgccctgta      120
tgtgttacgt gaacggatcc gcaaggggct acagctctat tcatctgaac ccactgagcc      180
ttattttgtc ttctcagaact atggtgagct cttctccaac cagattatct ggtttgtgga      240
tgacaccaac gtctacagag tgactattca caagaccttt gaagggaact tgacaaccaa      300
gcccatcaac ggagccatct tcatcttcaa cccacgcaca gggcagctgt tcctcaagat      360
aatccacacg tccgtgtggg ccgggacaga agcgtttggg gcagttggct aagtggaaga      420
cagctganga ggtggccggc ctggatccga cttctggctt gtggaaggaa cagcccaagc      480
cagaatcatt ggcanccagg aanggcagtc tngaccact ngaaggngcc cttactngga      540
cttccccaaa attgggcatt aaagggntcn gggcttcnaa ttcccttttc aggcenggtt      600
tnangngggg aaaaattcgg sgaatttnat ccttaaagcc nttgnc      646

```

<210> 803  
 <211> 544  
 <212> DNA  
 <213> Homo sapiens

<220>



<221> misc\_feature  
 <222> (1)...(544)  
 <223> n = A,T,C or G

<400> 803  
 acacgtcgtc ctccccggtc aggccctcaa agaaggggat gaggtccagc agctccgtgt 60  
 ccgtcatgtc atcgaaccag gactgcacag gcactgcatt ctcaggatgg aagatgtatg 120  
 aggcagggga attgtcaaca atgatacatt tgctcagctc ccgccaagg cgactcaggt 180  
 ccttcacgta gttcccacga tgaaaaaacac atgattctct qaagagccgg gcccggaaca 240  
 caccacagcg gtctaggagg tcagccacag ggtctgcata cttggccaag ctggcagtaa 300  
 agagcacaca ttcaaaaagc tgcccatcct ctggaggaac tcgtccacat gtggccgctt 360  
 cagcacatac acctgatgta tagttccatc gattcaaccg gaacaataaa atnagcanta 420  
 ctaaataaggc ttaaaacgaa ctgtgcacca atgggttcatt ctaaatcaat ggaccaccca 480  
 ttcttttcca tagtcnagca ccggtacctn tggaanaang tnccttgggc gngnaccccc 540  
 ttan 544

<210> 804  
 <211> 642  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(642)  
 <223> n = A,T,C or G

<400> 804  
 cgaggtacat ccttgtggga gagaacctca tcaatttcca catttcttcc aagttctctt 60  
 gccctgagac ggattctcat cgctttggaa ggcacctgaa agaagcaatg actgacatca 120  
 tcactttgtt tggctcagc tctaattcca aaaagtaatt ccactggagc tgctgggaag 180  
 gaaaacgagc tcttctgatg caaaccaaat gaaaaatagg cattaatcct gaccttagct 240  
 cgggatgaaa cactgtctct aaaaaaactc agttttcctt ccagaaaatg tgggtgtttt 300  
 tttttcctag aacagtatct ctcccctgtg aagcataacc ccactacttc cagacttgcc 360  
 ctcccctggg ggacatctga taaagtctcc cctgatgtct ccgcacggc ttggattatt 420  
 aagggatgca aatcttgggt agttaatnaa ngaattanta ngggtgtggn tttaccncc 480  
 agtggaaatg aaatnngngt gctttntant nggcaanncg aaggcctaag ctttangggc 540  
 ttttaacctt ntccangcng ggtaaacctt tggtttgn tnntntntaa 600  
 agttggggnc ccanttgagc taaccatttg ganngcctac cc 642

<210> 805  
 <211> 261  
 <212> DNA  
 <213> Homo sapiens

<400> 805  
 cgaggtacta cagagcccct ggacgggtgtg atgttggaag aggatgtttt ttctcaacct 60  
 gaaattagta atgaggctgt taatttgaca aatgttttac cagctgataa ttcatacaaca 120  
 ggatgctcta aatttgcgt tatagaacct ataagtgaat tgcaggaatt tgaaaacatc 180  
 aagtcatcca catcattaac tcttacagtt cgaagttcac ctgctccttc agaaaatact 240  
 catatttctc ctttgaatat t 261

<210> 806  
 <211> 311

<212> DNA  
<213> Homo sapiens

<400> 806  
gctgagagcg gctgatcgca gtccggaggt gaggcggaac tctgagcagg tgggtccatta 60  
tggctgacat gcaaaatctg gtagaaagat tggagaggcg agtgggcccgc ctggaggcag 120  
tatctcatat ctctgacatg caccgtgggt atgcagacag tccttcaaaa gcaggagcag 180  
ctccatatgt gcaggcattt gactcgctgc ttgctgggtcc tgtggcagag tactccagtt 240  
ctcagccaga accccgcaca ggtctttcct tatgggatac cagccccctca tacattgata 300  
aattgggtac c 311

<210> 807  
<211> 591  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(591)  
<223> n = A,T,C or G

<400> 807  
ggtacctgtt ctttgccagt taagatacat atcttattat ctttggtttt ttcaagtcta 60  
tgctcctgtt tgaagctttt cctgtaattt aggttgtctg tgaaataacct ataacatata 120  
attcctatag agtatgccac attttttttc taactcattt caaatgaaat tctctcagat 180  
tctagttttt gagcttggtcc actagatctg aaaataaagc atcctttcct gagtccactt 240  
gaactaattg tgaatttggt acttaattta ctggcatctt gggaacaag ttttgctgtg 300  
gcagggaaggc tgttttgaga gtgagccgtt gaagtctact ctggtttgtg gatgacattg 360  
cattaggggt tatttcctgn attaccagtg ccccttctgt gcaatatact ttatgacttg 420  
gaatgcaaca ccacttttaa aagcctgggt tcaagttttg aaagcattgg ttctgtgntg 480  
ccataatctg aagnttctgt gaaggattat tnaagcttta aaccttncaa ggtaaaaggcc 540  
aaattaggcc tgggaattacc tggaccttgg ncaaaaattn aaanattncn n 591

<210> 808  
<211> 641  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(641)  
<223> n = A,T,C or G

<400> 808  
actaaatgga ggcacgtggg agaagggagg ggccattgag gaacaaaaat gtgtttttaag 60  
gaagagatgg gaaagcagag accaggtaga ggagctaggt aagctgatag gtgttgtcat 120  
tggtagaaaa gaagaagata aatggatgta aggattgagg ccttggaag tagcataggc 180  
aggaaaagag gaattagaag aatcgtgaa gaagtgggaa tcatgggctg ggaaggga 240  
ttttggaaaa ggagcacatt aaggcagaaa actcttttag agcagtgggt ttaaacttca 300  
gcaatggtga tccttttata caagtatccc ttactttgga atcccaggaa gtaaaaggca 360  
cattcttggt gaagttgggg agtagcactt ggaaccctgc ttgcttaact ttttttcttt 420  
tgggcccttg aagtgtagta tattttaaaa tccactgggt tanaaggag tagttaagtt 480  
naagggaan aaaggatgat tgggaaaaga tcngaccga agggactttt tggtnacc 540

aaagttttng gtncccttgg aaaggggaagg ggcccccttt nggaattang ggaaatggaa 600  
acttggaaact gggnaaantt cctntnagct taaccttgan g 641

<210> 809  
<211> 388  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(388)  
<223> n = A,T,C or G

<400> 809  
acaagagggg gggctgggcc aggatgcccc agggctggcc acagccaccc cctcaaagg 60  
tggtgatgag aaaagagaca ccttcttctc tgagaacatc tttcagccac aaattagggg 120  
atctgttgcc tggcaataaa ggaacgaatt tataaaagag ttcaatggat ttgtgtcgac 180  
attctgtctg gggcctccca caatgagcta aaagccactt gaccagatcc aataaacaca 240  
atgatgcgga aggtggaaat cctcgcggca aacgtcgttt ctttgcttta tttaaagaaa 300  
catgcttctt ttcaatgatg cggcataggt gatcaatggc atcacaacac tgttgaattg 360  
tacctcggnc gngaccacgc taaaggcc 388

<210> 810  
<211> 175  
<212> DNA  
<213> Homo sapiens

<400> 810  
ggtacatcct cggccgggag tccccactgt ctctctacaa tgaggagctg gtgagcatga 60  
acgtgcaggg tgattatgag ccaactgatg ccaccgggtt catcaacatc aattccctca 120  
ggctgaagga atatcatcgt ctccagagca aggtcactgc caaatagacc cgtgt 175

<210> 811  
<211> 329  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(329)  
<223> n = A,T,C or G

<400> 811  
ctgcgcggtt gttctctgga gcagcgttct tttatctccg tccgccttct ctccctaccta 60  
agtgcgtgcc gccacccgat ggaagattcg atggacatgg acatgagccc cctgaggccc 120  
cagaactatc ttttcggttg tgaactaaag gccgacaaag attatcactt taagggtggat 180  
aatgatgaaa atgagcacca gttatcttta agaacggtca gtttaggggc tgggtgcaaag 240  
gatgagttgc acattgttga agcagangca atgaattacg aaggcagtcc aattaaagta 300  
acactggcaa ctttgaaaat gtctgtacc 329

<210> 812  
<211> 668  
<212> DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (668)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 812

acggatgcta	cttgccaat	gatggtaaaa	gggtagctta	ctgggtgtcc	tccgattcag	60
gttagaatga	ggaggtctgc	ggctaggagt	caataaagt	attggcttag	tgggcgaaat	120
attatgcttt	gttgtttgga	tatatggagg	atggggatta	ttgctaggat	gaggatggat	180
agtaataggg	caaggacgcc	tcctagtttg	ttagggacgg	atcgagaaat	tgtgtangcg	240
aataggaaat	atcattcggg	cttgatgtgg	ggaggggtgt	ttaaggggtt	ggctagggtg	300
taattgtctg	ggcgcctag	gagggtcgtg	gagaatagt	ttaatgtcat	taaggagaga	360
aggaagagaa	gtnacccaag	ggcctcttta	nttgtgtaat	aanggttggg	aggtgatttt	420
tatccgnaat	tgggangtga	tcctaaagg	gggtggttga	nccccntttc	ctgccanaaa	480
tagganggtg	gantttctgct	tagggcttcc	aataattgan	gggcctnaaa	tnaanttgha	540
aanggtaaat	aaaacctttt	naagggttgg	gaccttgttt	cttgngtnna	ncccccttan	600
nattccattg	gaacttaggc	ttggncccat	gtnttgggan	tggcggataa	ttaanttttg	660
aaattncc						668

&lt;210&gt; 813

&lt;211&gt; 312

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 813

ggtacaggca	gggtagatct	aactattgga	aggaatccct	aacacttttc	cagggtagaa	60
ttctggctag	tccaaaaagg	gtccttcttt	taagggtttt	gagaaactag	acactgcaac	120
ttattagtat	cggcgacgtt	tgtttggggc	aaattcagct	ccaggagctg	cacggttgaa	180
tgcaggagga	gttccaccaa	ttgccccaat	tccttccatt	gtagcagcct	gaccaaagcg	240
ttcagttggt	gggtgggttca	atcccaaagt	tccatccggc	atcatagtgg	caggtcctgg	300
aggagctggg	gt					312

&lt;210&gt; 814

&lt;211&gt; 551

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1) ... (551)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 814

caggtactct	gaagtataca	caacaggtct	aaacatctcc	cttgctgtaa	gtagttgtgt	60
aaaattcaag	ataaagattt	agtctcatct	tttaatgtca	gtttttttcc	ccatgttaaa	120
gggaatgagg	aggagtcctc	ttttattccc	ccacaagaaa	aaggagacca	cattaatatg	180
tgtatattcc	cataactcta	atgtaagtgc	ggatctccaa	agcctaggga	tttttccgta	240
aaagagagtg	ggcgtttctg	gttacccttt	tattagaagg	gtattccacc	acagagagcc	300
ggaggttttc	cagatgtgtg	taagrgagca	ggtgcgcaag	gcaagcaaat	gagcgcaaac	360
agtattatgg	aaaacatttg	agaagttagc	tccatgagga	ctgtgggctt	cacaagagga	420
ctcgactggg	tagccctggc	tgacanagga	cctgaaaagc	ngagtattgc	ttcaaacttg	480

gaacntttca taggagccta acactgttgg aagaagtacc ttggcnggac caccttangg 540  
gcaattcnag c 551

<210> 815  
<211> 619  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1) ... (619)  
<223> n = A,T,C or G

<400> 815  
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cttgatgctg gggcctgtgg cagcacacag ccagtagcgg ttagggctga agcacagggc 120  
gttgatgatg tccccaccat cttagcgtga aagggtgttg ccttcgttga gatcccataa 180  
catggcctgg ccattccttg ctccagaagc acagagggat ccattctggag agacagtcac 240  
cgtgttcaga tagcctgtgt ggccaatgtg gttggtcttc agcttgagc tagccaggtt 300  
ccataccttg accagcttgt cccaaccaca ggagacgatg atagggttgc tgctgttggg 360  
cgagaagcgg acacaagaca cccactctga gtggctctca tcctggacag tgtattttgc 420  
acacacccag ggtattccat agcttgggtg gtttacctgn ccggcgcccg tcnaaanggc 480  
gaattcacca tggcgcccg actagngatn caacttggnc caacttggcg gaactctggca 540  
tactggttcc tngggaaatt gtttcngtcc aattccncna aattnaaccg gaagnttaaa 600  
ggtaaaaactt gggggccta 619

<210> 816  
<211> 658  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1) ... (658)  
<223> n = A,T,C or G

<400> 816  
actccagcag ccaggcatcc cagatctcct gtccctggagg gtgctggggc ccctggctcc 60  
ccagagtgtg caggcagacc cccagagccc tagctcatcc atttatccat tcctcataat 120  
ccagtgtcca aagagtaccc ccagcagggc agggaaggtc cctcccgagg tttacatgac 180  
tgattccttc tcagaggcga ccgtggcatc ccctgcgggc ccccgatagt gtttgaggag 240  
ggggtttcct tcctcaggct ctgtgcttct cgactccgta caagcttttt tttttttttt 300  
tttttttttt tggaaggaga acaattttat tctaaaaata gaacttggtg acaatgaaat 360  
accaaaagct ggtcattata ataaaaagaa aagaanagtt taactttttt tttgtgaaaa 420  
ttcnaaaatt atcactataa tatactgcca actntggtna attnganttt gaattatttc 480  
ctttcatngg attatttcaa gggaaatttt taaaattngn ttttggccta aaaccttngg 540  
ccgggnaccn cnccttanggg gcnaaattcc aatccaantg ggggggnccg taacttaagg 600  
gggancccaa ccttgggnnc caancnttgg gngngtaaatc atggggcana ncntgttt 658

<210> 817  
<211> 141  
<212> DNA  
<213> Homo sapiens

<400> 817  
 actttcttct gccataactt cttcctcagt tcctacaggt gtgacacttt tcaacttctt 60  
 tggaagagggc atttccactg tatcatcaga gacttggtct gatgcttcta tgggtgctatc 120  
 ctcttctctt tcacgtgtac c 141

<210> 818  
 <211> 280  
 <212> DNA  
 <213> Homo sapiens

<400> 818  
 ggtactttaag aactcaagta tagaaataaa ctgtgggctg aagtaacatt gtaacctgct 60  
 cccaacatga ctgcataggt gtctaagggt aagtgtgaag attactgtga ggtctcaagt 120  
 tacttgacta atcaatccca tttgaatttc aatccaagca gcatatttta cacacacctg 180  
 aaggaaatat cttcagtggtg ttcatgtgtg tgtctatgtg catgtatgtg taggggatag 240  
 gtgtaattag ggaagggctg accgaacaac attgataagt 280

<210> 819  
 <211> 635  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(635)  
 <223> n = A,T,C or G

<400> 819  
 ggtacttgag tccttctcat ggggtggggtg attgcctctt ctcattcagga gccaggagag 60  
 aggggggacag ataggaggtg gcccatagga gcagtcccg cgcacaatgg taggcatagg 120  
 ccatggcact ggactgcctc taaggactgc taaaaagaat atttttttgt ggtgtcagaa 180  
 ctggaaaaag cactttccct tcgggcattt ctggaaatga ttattaatcc acaaagaaga 240  
 actctgtaag ctttttcttg aattgtancc agtgagaaaa gcagatagac tgaagaatat 300  
 gaaggatagc tgagctgtnc ctncatagtg gggcatgcct aggcataatg ctggcttgga 360  
 gactactgat gcttttccct gagtttgtat tggcactgan gtatggccgg cttgggccac 420  
 tgacttccca ntaatggaat ctgntnaaaa cttggggatt ccttttagctt nntactggaa 480  
 gaaaantttt gtancnaaaa gatattataac cnnttagnaa taagtttncc agcanccng 540  
 gatttttttt nngcttgggg gttnttggcg ncctttannn aaggacnggg cnttgnntt 600  
 cntctttacn aggccttgnt ntgancntgg agaan 635

<210> 820  
 <211> 276  
 <212> DNA  
 <213> Homo sapiens

<400> 820  
 acatcttctt cctgagttac gcttacaaaa ttttcaaaca tagcaaccat tgatggggcg 60  
 gcaatcacat gacaattcac aagatcagat aaaaaacgga ccaaatacac ggcttcatta 120  
 taattgtttg ctttcaatga ttctttaagt tgacgaatca tggcttctac aaattctcca 180  
 ccaaaattgt aattcctggc attcagtagt ccaactaatg ttgtataaat tgtcagcttc 240  
 tcaggtaata ggcgtgcact ggatccataa atcacc 276

<210> 821  
 <211> 728  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(728)  
 <223> n = A,T,C or G

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<400> 821
acaatgatgc cagaagcttt ccttcaagaa gctcagataa tgaaaaaatt aagacatgat      60
aaacttggtc cactatatgc tgttgtttct gaagaacca tttacattgt cactgaattt      120
atgtcaaaag gaagcttatt agatttcctt aagggaaggag atggaaagta tttgaagctt      180
ccacagctgg ttgatatggc tgctcagatt gctgatggta tggcatatat tgaaagaatg      240
aactatattc accgagatct tcgggctgct aatattcttg taggagaaaa tcttggtgctc      300
aaaatagag acttttggtt agcaaggnta attgaagaca atgaatacac agcaagacaa      360
ggtgcaaaat ttccaatcaa atggacaagc tcctgaagct gcaactgnatg ggccggntta      420
caataaagtc tgaaggcctg gncatttttg aattcttgca aaccggaact tagttaccca      480
aangggncctt aatngccntt attcccaggt antnggggga ccccggnna aagtaaccn      540
ttggggcccg ggaaaccacc nccttaangg ggccnaaatt tccaggcnn cnaactgggg      600
cgggggcccg ttancttaag gggggaatcc ccnaacnttt ggggacccca anacntttg      660
gcgggaaaac cnatnggggn ccaaaanacc gnggntnccc ccgnggnggg naaaaaattg      720
gnnttnnc

```

<210> 822  
 <211> 632  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(632)  
 <223> n = A,T,C or G

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<400> 822
actttacggc ctgatctaatt tgaaagtgc tcccttggtg caagtggcaa agctgaactc      60
atcaaaaacc atcacaatga cacagagctc atcagaaagt tgagagagga gggaaaagta      120
atagaacctc tgaaagattt tcataaagat gaagtggagaa ttttgggcag agaacttgga      180
cttcagaag agttagtttc caggcatcca tttccagggtc ctggcctggc aatcagagta      240
atatgtgctg aagaacctta tatttgtaag gactttcctg aaaccaacaa tattttgaaa      300
atagtagctg atttttctgc aagtgtttaa aagccacata ccctattaca gagagtcaaa      360
gcctgcacaa cagaagagga tcaggagaag ctgatgcaaa ttaccagtc tgcattcact      420
gaatgccttc ttgctggcca tttaaactgt aggtgtgcan ggtgactggc cgttcctcag      480
ntncttggtg ggaatcttcc gtnaagatga acctgacttg ggancactta ttttttnggc      540
cangnttaaa ccttncatng ngnncaactt taccangtn gnttantatt tngncccccg      600
ttaanacctt tctnccngnt cctccatttt tg

```

<210> 823  
 <211> 649  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(649)  
 <223> n = A,T,C or G

<400> 823  
 actgctgcaa cccatgcagc gtcaacttcg tctcatcatc cacgaagatc tccattggat 60  
 cttgcatgaa cttgcggcag actggacgga tctctttgct caaggtagca ctgaacatca 120  
 tgacctgctt ctctgtggggg gtcattgcgaa aaatttcctg gacatcccga cgcatgtcga 180  
 gctgttcaag catcttatca cattcatcca aaataaagtgt tttaattgtgt ttgaggttga 240  
 ggctcttatt tgcagccagg gctaggatac ggcttgagg cccacgacg atatgcgggc 300  
 agttcttctt cagcacctct tcatccttct tgatagacag accaccaaaa aaaacagcaa 360  
 ccttgacatt gggcatgtat ttagagaagc gctcatattc cttgctgatc tgaaaagcca 420  
 actcccaggt ggtgacacca tcaccagcac agacacctgc ccagtaacct ggcttccaac 480  
 tgggtgcant gnnngggccaa gaacaaacac tgggtggcttt tccatgcccc natttgggct 540  
 tggcnccagg aaattcantt cccaaaatgg gcttgaaggg atgccnttnt gcttggactt 600  
 ttgacgggat gttnaaggcc ccagnttnan aatggncccg gagcaattn 649

<210> 824  
 <211> 603  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(603)  
 <223> n = A,T,C or G

<400> 824  
 accccttata aaccagcaat gtcattctgt aggaagcaaa ttctcaagtgt tctgtcattt 60  
 acttggttct ttttctttgt ggtcttcacc cttataccct ggaaaagtct gtaattacct 120  
 tagccaggaa gatagatggt catggcaagc gcacagcacc agacttactg gctcaccaag 180  
 atgatggaaa aaggcagatg attttttaaa aagccgtaat gactccttta gaccagccat 240  
 ttagcgtggt aattttgaaa ggcctagctc cattgcagac ttccaaagggt tcagctctga 300  
 gactgccctc caggtgggca gttgattatt tccaccagtgt ttttccagag ccttaaactg 360  
 cctaagtac aactacctca gttggcagga aaagagacat atagtagaaa gtgaaaaatg 420  
 agcagtattt gggcagatgc tatggggtac agttgaangg taaaangggac tttccttggg 480  
 aacccttatn ccctgngaatt atgacctngg ccggacacnt taaggcnatt cacnntgngg 540  
 gccgtctaan ggnnccactt ggncancttg ngnaaaaggc aaactgtntc gngnaatgtn 600  
 ccc 603

<210> 825  
 <211> 634  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(634)  
 <223> n = A,T,C or G

<400> 825  
 tgaaaaataa actattntat ttcagtgttt gctccttgcg gttcagaagc acatctactg 60



cctgggttga	acccaaggct	tttataaaac	cgtagagaaa	tatgagctct	atgtatagag	120
aaaatataca	tggtgattaa	ttgtgtgact	ctttcctgtg	caaagcagaa	agttctaaat	180
gcaacagcat	gattctctcc	aagtccttcc	ctgggatttg	gggggcccctg	gaggctgtga	240
tctcacctcc	aatagagaat	cccccaattct	tccagcccaa	gggaggccca	gncatgtaga	300
aagagcagga	gataaaagtca	aagctgacaa	ctcatgggtt	ccccaaagctt	ctccggggca	360
ggggctatgt	ttgggggcct	taccctgcaa	agaaggggta	gctgggggtgc	cnaccttggg	420
gggtaagtgc	cacactggca	ctaaagctgt	tgggaagtct	agcattgcan	ccggccagggt	480
ttatgggtna	accagggtgt	ccaanggggt	tttttcccta	aaactnngggg	ctnaaaggng	540
gggaccctng	gcncgaaccc	ccttangggc	aaatcccggc	aattgggggc	cntttttaan	600
gggnnccaac	ttgggaccaa	acttgnggna	atnn			634

&lt;210&gt; 826

&lt;211&gt; 507

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(507)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 826

ggtacctgaa	gaacaaatcc	cttcagggtt	aagctcgaca	ggacactttc	cccagtccca	60
ggtttccatt	tccctcattc	ccaaaagggg	cccctccctc	tccatgcgca	cacagaactt	120
ttegtccacc	caaaagtcct	ttctgtctga	tcttttccca	tcatctttct	tccctctact	180
tactactccc	tctagaacag	tggattttta	atatactaca	cctcagggac	caaaaagaaa	240
aagttaagca	agcagggttc	caagtgtctc	tccccaactt	caacaagaat	gtgcctttta	300
cttcctggga	ttccaaagta	agggatactg	tataaaaagga	tcaccattgc	tgaagtttta	360
aaccactgct	ctaaaagagt	tttctgcctt	aatgtgtctc	ttttccaaaa	tttcccttcc	420
cagcccatga	ttccacttct	tcacgtattc	ttctaantcc	tctttttctg	gctatgctac	480
ttttcnangg	ctcaaaactt	aaattcn				507

&lt;210&gt; 827

&lt;211&gt; 617

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(617)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 827

cgccagcgct	gcaggagctg	acatggaccc	aaatcctcgg	gccgccctgg	agcgccaaca	60
gctccgcctt	cgggagcggc	aaaaattctt	cgaggacatt	ttacagccag	agacagagtt	120
tgtctttcct	ctgtcccatc	cgcatctcga	gtcgagagaa	ccccccatag	gtagtatctc	180
atccatggaa	gtgaatgtgg	acacactgga	gcaagtagaa	cttattgacc	ttggggaccc	240
ggatgcagca	gatgtgttct	tgctttgcga	agatcctcca	ccaaccccc	agtcgtctgg	300
gatggacaac	catttgaggg	agctgagcct	gccgggtgct	acatcagaca	ggaccacatc	360
taggacctct	tctnctnctc	ctnctgactcc	tncaccaacc	tgcataagcc	aaatccaagt	420
gatgatggag	cagatacgcc	cttggcacag	tengatnaaa	ggaggaaaag	gggtnttgga	480
ngggcaaaan	cttgannctg	cagntagcaa	tgggccctgc	tanaantgnc	caccttggtg	540
ttttccaatn	nnacncaggc	caccnaactt	ttgganaaac	caanttttnt	tgcgngggcc	600

aaggggaagn ngnggat

617

<210> 828  
 <211> 448  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(448)  
 <223> n = A,T,C or G

<400> 828						
actgtcacct	ttttaagtgg	aaagaaatat	agtgtggatg	atttacactc	aatgggagca	60
ggggatctgc	taaactctat	gtttgaattt	agtgagaagc	taaatgccct	ccaacttagt	120
gatgaagaga	tgagtttggt	tacagctggt	gtcctgggtat	ctgcagatcg	atctggaata	180
gaaaacgtca	gctctgtgga	ggctttgcag	gaaactctca	ttcgtgcact	aaggacctta	240
ataatgaaaa	accatccaaa	tgaggcctct	atttttacaa	aactgcttct	aaagttgccca	300
gatcttcgat	ctttaaacaa	catgcactct	gaggagctct	tggcctttaa	agntcaccct	360
taaggccttn	gtttatttaa	ncatgaactg	atggtaactg	nacctcngnc	gcgaccacnc	420
taaggccaat	tccananact	gnccggcg				448

<210> 829  
 <211> 619  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(619)  
 <223> n = A,T,C or G

<400> 829						
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gttcagcttt	ttttttttgg	ttgttgctct	tttttggggg	ggttgggttt	gttggtttca	120
ctgaaacatt	taactacctg	taaaatctaa	acatggctgt	tagtgtcaca	ccaattcggg	180
acacaaaatg	gctaacactg	gaagtatgta	gagagttcca	gagggggact	tgctcacggc	240
cagacacgga	atgtaaattt	gcacatcctt	cgaaaagctg	ccaagttgaa	aatggacgag	300
taatcgcttg	ctttgattca	ttgaaaggcc	gttgctccag	ggagaactgc	aaatatcttc	360
atccaccccc	acatttaaaa	acgcagttgg	agataaatgg	acgcaataac	ttgattcagc	420
agaagaacat	ggccatgttg	gnccagcaaa	tgccactagn	ccatgccatg	atgcctggtg	480
cccattacaa	cccgngccat	ngttcaattg	nccaacttac	cnccatgcnt	aacagccgct	540
ttannccctt	tggacctttt	ttccancttg	gcccggcaaa	attttccant	ggccaattgg	600
ttccgggant	ccgggtcct					619

<210> 830  
 <211> 618  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(618)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 830

ggtacaccct	agccaacggg	acaaatccta	gaggggtataa	aatcatctct	gctcagataa	60
tcatgactta	gcaagaataa	gggcaaaaaa	tcctgttggc	ttaacgtcac	tgttccacct	120
ggtgtaatat	ctctcatgac	agtgcaccca	aggggaagttg	actaagtcac	atgtaaatta	180
ggagtgtttt	aaagaatgcc	atagatgttg	attcttaact	gctacagata	acctgtaatt	240
gagcagattt	aaaattcagg	catacttttc	catttatcca	agtgccttca	ttttccaga	300
tggcttcaga	agtaggctcg	tgggcagggc	gcagacctga	tctttatagg	gttgacatag	360
aaagcagtaa	gttgtggggt	gaaagggcag	gttgtcttca	aactctgtga	ggtagaatcc	420
ttnnctatac	ctccatgaac	attgactcgt	gtgttcagag	cctttggcct	ctntggngga	480
gtctngctnt	ttgggctcct	gggcacccct	ttgaatagtc	actctgtaaa	actngccann	540
gctttgaaac	tgggtncctt	acccanggtg	naagggncctt	tgttggcctt	tanaagggtn	600
ggncatncct	ccaaaacc					618

&lt;210&gt; 831

&lt;211&gt; 648

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(648)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 831

acatgaaaga	cacgtccaca	tcacagttgc	ccccaaactg	cctgtgctcc	tcgatgggtgt	60
ctctccctcc	agaaaaacgca	tgcttattga	ccttggtttt	gatctgcttg	gccgtgtcgg	120
tgaggaagat	ggaggagttg	gggtcgctgg	cactcatttt	ggtctgggcg	ccctgcaggg	180
ctgggaagaa	ggtggagtg	aacagggtg	gtttaggata	gccgatcctg	ggggcgacgt	240
cccttgctcat	tctaaagtaa	ggatcctggg	caatggcaca	tgggataagg	cactggatat	300
ccgtcctgtc	tcggaagatc	tgtgggaatg	agttgctgaa	ggaggagca	gcctggatgg	360
caggaaaact	gatcttccca	atgcagtcgc	tgtcagtga	acncgaaaaa	tgccctttcac	420
tttggtttga	aggtaacatg	cctttttgaa	tcttcaccac	attttttgta	gaaaccttgg	480
nccttnatnc	cccagtgagn	nccaggttca	naanaatntt	gaaaagnctt	tggtggaagg	540
tcaaaaancnc	caggccaant	aaaggncctt	tggnaatttt	ttcccnggnt	ataactttnt	600
nggcctgggn	ccaaggtcaa	nggccctttc	cnaannaact	ttttnggn		648

&lt;210&gt; 832

&lt;211&gt; 689

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(689)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 832

gtccccacga	actggcctgg	ccaagcacc	cacactggag	ccatctcttc	ctcatatttc	60
agcagtgcag	ccggggggca	gggaagggca	ggcagggtct	gttggggctc	ctttttatcc	120
ttattcctcc	cccagaccta	ttgtctttgt	tctgtgatta	ttgggggaca	cccggctccc	180
cccagacaat	gccagcataa	atccatccat	ccaaaggcag	agaaccaaa	gggccatgga	240

aggttctctg	tgtctctcct	acccttccag	tgccctaggc	ctggcgactg	cccctgcctt	300
ttagaccgcg	ctccctttta	tacctgctct	tgntctactg	agaaaagcct	ctcagcaata	360
atgnttttcta	gtcacttcct	ccgncctcgg	gacgggcgtg	cctggacact	tgtaccttng	420
gcccgcgaac	cacgcttaag	gggcgaaatt	ccaagcacnc	ttggccggcc	ggttaccttn	480
gtngggatnc	ccaaccttng	gnnncccaaa	ccttgggcgg	taaaccatng	ggnccttaac	540
ctngngttcc	ctgggggngn	aaaantngta	atttccgggt	ttacccaatt	ttccncccca	600
aacnttntcc	caaancccg	gaaaaccctt	aaaaggnggg	aaaaancccc	ttgggggggg	660
gcctnaann	nggagggtgg	ngcnttanc				689

<210> 833  
 <211> 726  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(726)  
 <223> n = A,T,C or G

<400> 833						
ggtactaatg	tgaattgttc	ctcagaaaacg	cttcttttct	atcctagtga	gaagctggcc	60
ctgcaggtgg	tggcagcaat	ggtgttgtaa	gatttcctcc	cgtagttttt	tctcctcatg	120
gatttgaatg	aaatgccaat	aacacgtcca	ctttcaacgt	gtagtttacg	cggagcactt	180
tcgaggcctg	gccgggttgg	gcctacttct	cacctgggcc	tatcttctga	actcgctagg	240
ttcttatcaa	catttggggg	ataactttgt	atattttttt	tattnggctt	ttctttacca	300
gtttctgatt	tttattctca	atataatttt	gctaaaacct	atttcacaaa	tnaccaccng	360
actgaaagtg	tgtgnttact	gatgcggccc	ttgagcttcc	atgggcgaaa	ggagtgactt	420
ttgcagcngc	cgtnaagaac	ccgnaaatct	ggtttnanag	cncanggaa	agtngaccac	480
cnttangggg	agccccncg	tangggggcg	ctttgtaang	ccnccnggg	ggaaccccc	540
annnaccggt	gggggtcctt	aaaagnaana	nanaccgggg	gtctttaagc	ttntttcctt	600
gggccacncc	cccaaaannn	gggnttttcc	caatttntta	anacnctntc	ttnggggggg	660
tcctngngng	aaatggngga	aaaaaangcc	cnnntnnttg	ttnggggngg	gnaccncaan	720
gtggng						726

<210> 834  
 <211> 628  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(628)  
 <223> n = A,T,C or G

<400> 834						
ggtacgagag	tgtagccaaa	gtgagaggct	gagagcaaag	gagacatttt	tttcagtttt	60
gagtcgagta	tccagacaga	ggcaaatcat	tttgtttaac	tttttattaa	agtgtaaacta	120
tagaaacaca	tcaatgattt	ttcacaagtg	gagcactgtg	catacaatcg	gcacccccaga	180
agccccccgt	cagattccct	tccagttaac	tacctctcca	agggaaacca	ctatcctgag	240
ttctaagcgc	atagattagt	ttctgtctgg	tttggggaga	tatataaatg	gaattatgca	300
ttcttcgtat	ctggttnctt	ttcaccaata	ttatgtttgt	gagatttttg	gtgcatgtat	360
ttgtacagnt	ttgctgattt	taggtgttgc	gcctcattgg	gaacagtttg	ctataggttg	420
aagagaaaat	ttgctcttcc	ggtttantgg	caccanggag	canaatgcc	ncagtgtntg	480

gnctcngata	atggggtcgaa	attggggangt	gggctggacn	tttttnactt	gntctttctg	540
atctngantc	ggttncctat	tcnatatttg	gntntcttcg	gaattntttg	ntngaacttg	600
cctgggccng	gctgttctan	agggnnag				628

<210> 835  
 <211> 602  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(602)  
 <223> n = A,T,C or G

<400> 835						
ggtactgaaa	tcacaagagc	tataactgcc	agagaaaaat	taaatggggt	cttcaagtag	60
tgactgagcc	agcaaactaa	gtggccaaga	gggagacaag	agcagctcct	aaagaagggt	120
gaagtcaagc	aatctccgga	acacagagga	tctgaagcat	ctgggcagag	ccacaggcag	180
gcanggcaag	gacacacagc	acaccagagc	agcaccgtcc	ttcactgtgt	gagagcaact	240
ctcaggctgc	agaaccaatt	gccatctcca	ctgcctacag	ctcaggctctc	caactaccag	300
atagggagta	aaaaaagtt	tgattttatt	cacctcaagt	ctaaacacgg	ngggaaaaaa	360
aactggctta	nagatggaaa	ctatatattca	tggggggttta	ttaaacagag	aaagaggaga	420
atcttcacat	ttcacagggc	ttttcntgaa	ataaagactt	gatctgaaaa	ggcaccctta	480
tggcangctt	taacttccta	agntngggna	gnncccaaat	tttccannaa	tcttggggacc	540
ncttgcccag	tngatttttt	ttaaataact	nagctnaatt	gntnggntaa	tttnataana	600
ng						602

<210> 836  
 <211> 355  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(355)  
 <223> n = A,T,C or G

<400> 836						
acacaatgct	tctgccagtc	ctattcaggg	ccaaggacat	gtgcttataa	ccatctgcca	60
aattttccaa	actgtcacag	taacaaccat	caaatttttag	cagatctact	ccccagtcag	120
caaaggctctg	ggcatcaatg	tcgtagtata	caaaactccc	aggggaagcct	gcgcagggttt	180
tattttccaa	atctgcataa	atccctagct	tcagtccttt	gctgtgaaca	taattagcta	240
gctggcgaa	cccatgagga	aagcgctgag	ggtctgcctg	aagtctgcct	tctgaatctc	300
tttggggagc	catccaacag	tcatcaatgc	agaggtacct	cggncgngac	cacgc	355

<210> 837  
 <211> 611  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(611)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 837

```

ggttttttttt ttctgtgattg tattcccata aagcttttatt tgtggactct aaaatttgaa      60
ttttatgtga ttttcacata tcacaaacat tcttcttctt ttaatttttc taaccattaa      120
aattataaaa aactttctta tttttgcagg ccatacaaaa ttaggcagtg ggccaaatct      180
ggccgctagt ttagaagggtc cacggtagtc tcgctcgag gcatggcagt tgcagctggc      240
tggggcaccc tggttctcct ccacaaggcc ttctatcctc cagaagtctg aattggcctt      300
gttcatggca ctttcagggc agcattccaa gaggtggaag ggagagtctg caaagacttc      360
tgaggctggc tccagacctc actcagtatc cccactgctc catttcagtc agagtnaagt      420
cactagtntc gccagactc aagggatgaa gggaactgnc tntanctcat gatgaagata      480
acntgtgaaa tactggggggc tgagtttttc anttancncc agggagtaat tttcatggnt      540
taaanggcac tcccccttat ttttgaagcc ntaanttcng gcntttanng ggaantaatt      600
aaccnccctt a                                     611

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&lt;210&gt; 838

&lt;211&gt; 650

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(650)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 838

```

ggtacttcca cctcggggcac attttgggaa gttgcattcc tttgtcttca aactgtgaag      60
catttacaga aacgcaccca gcaagaatat tgtccctttg agcagaaatt tatctttcaa      120
agaggtatat ttgaaaaaaaa aaaaagtata tgtgaggatt tttattgatt ggggatcttg      180
gagtntttca ttgtcgctat tgattttttac ttcaatgggc tcttccaaca aggaagaagc      240
ttgctggtag cacttgctac cctgagttca tccaggccca actgtgagca aggagcacia      300
gccacaagtc ttccagagga tgcttgatcc cagtggttct gcttcaaggc tttcactgca      360
anacactaaa gatccaagaa ggccttcatg gcccncccca ngcccggatc ggtanctgg      420
ccgggcnngn cngtnnnnaaa gggcnaaatt tcnccacact tggccgnccg ttactaagtn      480
ggantccnaa gcttggn tan ccaagctttg gngnaattct ngggcatann nctgggtnc      540
ttgnngnaa aatgntantc ccgtnnnnaa ttcccttcann cnnanctgan cctgaaagct      600
ttaantgggn aaacnttggg ggtccctaatt tngggggacn taacntctnt      650

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&lt;210&gt; 839

&lt;211&gt; 626

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(626)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 839

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actaaacgag cagggtgaagg aggtgaagg atcgtctgct gaatacaaga aagaaattga      60
ggaactaaag gaactgctac ccgaaattag agagaagata gaagatgcaa aggagtctca      120
gcgtagtgagg aatgtagctg aactggctct gaaagctact ctggtggaga gttctacttc      180
aggtttcact cctggtggag gaggtctctc agtctccatg attgccagta gaaagccaac      240

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agacggtgct	tcctcatcaa	attgtgtgac	tgatatttcc	caccttgtca	gaaagaagcc	300
ttcacaaatta	tatcttttaga	ggaaaccaga	ggaaganagt	ccncggaaaag	atgatgcaaa	360
gaaagccaaa	caagagcncg	gaagtgaacg	gaaggcnttt	ggggatgcct	gtccccaagt	420
ggaaaatgaa	gtttcngaaa	acantggagg	aggangctga	naatcaggct	gaaagccnng	480
ccnccaatgg	aagggacccat	tgtanggctt	ggancttcng	gtngaaagcc	nttgcttttt	540
aaaaangggg	cccagncctt	tcttccangg	gaaaagggnt	tttggaatta	aangnttttt	600
tnacnttttt	ganggatcct	tttggt				626

<210> 840  
 <211> 323  
 <212> DNA  
 <213> Homo sapiens

<400> 840						
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tcactgtcac	tggatgaggc	cttcttctta	gctttcttag	ccactggtec	atttgccctgt	120
aactttcgct	ctgggacctt	ggcagacctg	ttgagccaga	agctatagat	gtctaagagg	180
gaagaggcat	tggcatcctg	ctgtgtagct	cctgtcgctt	tggcgaactt	attggccacc	240
tctgagagtt	ggttatcgcg	caggaagccg	agcacgaggg	gatacaggtc	gctgggaacc	300
acgcggcgaa	tgccggcgtc	cgc				323

<210> 841  
 <211> 614  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(614)  
 <223> n = A,T,C or G

<400> 841						
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ctaagaacgc	agtggaggaa	tatgtgtatg	aaatgagaga	caagcttagt	ggtgaatatg	120
agaagtttgt	gagtgaagat	gacgtaaca	gttttacttt	gaaactggaa	gatactgaaa	180
attggttgta	tgaggatgga	gaagaccagc	caaagcaagt	ttatgttgat	aagttggctg	240
aattaaaaaa	tctaggtcaa	cctattaaga	taccgtttcc	aggaatctga	agaacgacca	300
aaattatttg	aagaactagg	ggaaacagat	ccaacagtat	atganaataa	tcagctcttt	360
caanaaacia	ggaggaccng	tattgatcat	ttggatgctg	ctgacatgac	caaggtagna	420
naaagcncaa	atggaagcaa	tggaattgga	tgaataacca	agcttaattc	tgctgancaa	480
gcnatagttt	gncattggnt	nnagttgtta	ngtccnaaga	gnattgaanc	ttaaanttna	540
gggctgccaa	ngnctttggc	cgnacncnc	ntnagggcna	tttcagccnc	ttggcggccg	600
ttctatggnn	ncnn					614

<210> 842  
 <211> 609  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(609)  
 <223> n = A,T,C or G

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<400> 842
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acgatacaag cgaactgcct ctccaatgtt tccctgttct cgtttgatat tggctagggtt 120
attcagagag tctgcatggg tgggacacag acggagagct gtattataac aatcttctgc 180
ttcagcaacc tgtcaaaaat gcgtgcctct ttcaagacat ttccataaatt gatataagca 240
tccagaaagt ttgggtcaag ggtgacagcc ttttcaaagt gatgaattgc aagccaaatt 300
tccccttggtg cattgaaaac acagccaaga ttactccaag ctactgcaaa gttcgggttgc 360
gtctcaattg ctttcaaata acatgccttg gcttcttcca agcgacccaa ggcttttaca 420
ggtncccagg tcaactgcgaa cacagtacct gcccggcggc cgttcaaang gcgaaattca 480
gcacacttgc ggnctgnta gtggantnnc agntcggnc caacttgggn ntataatggg 540
canaactggt ccctggggga aantggttnc cnntaccatt tcnccacttn cgaccggaag 600
cttaaangg 609

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<210> 843
<211> 610
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1) ... (610)
<223> n = A,T,C or G

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<400> 843
gggtttttttt cgcaggtatt tctctgtctt taatagacaa ttttagaaaag acatgttaac 60
gggggaaaaat cacacaatac taaggatctg agggccataa acatcacata tgttgagttt 120
gcttttagtt ttgtttccaa cagtctttaa ccaatgttcc tggctgtaat ctaggtgcta 180
gacgcactgc aaatcctcga aagtgtttaa gatgaaagag caatacactt aagatcttca 240
aaagttttaca ttaacagaat aagcattagc tccttttaac acacacacac aactaaatta 300
acaaatgaaa tgtgtctact tttatatatg ccataaaagc agacacttaa cattgaaatt 360
tactatttta gatttttact cctttaagag ctatcaatat agacactnaa gataattcac 420
attnaaaaa ttatctacct ggaagaatag aacttcttta agaaggaaaa agnaaaagct 480
ggtgaaacca aggattgcct ggggtnggaa ggaccgnttt naacctgggc cttaaattgnc 540
ntgagnacaa ttgattggtc nnncttgggc tntnttggtg acaccggcct tcanggtttt 600
cttgaccnc 610

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<210> 844
<211> 675
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1) ... (675)
<223> n = A,T,C or G

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<400> 844
ggtacacctg aattccaggc caatgaagtt cggaaagtga agaaatatga acagggattc 60
atcacagacc ctgtggtcct cagccccaag gatcgctgct gggatgtttt tgaggccaag 120
gcccggcatg gtttctgcgg tatcccaatc acagacaag gccggatggg gagccgcttg 180
gtgggcatca tctcctccag ggacattgat tttctcaaag aggaggaaca tgactgtttc 240
ttggaagaga taatgacaaa gaggggaagac ttggtggtag cccctgcagg catcacactg 300

```



aaggaggcaa	atgaaattct	gcagcgcagc	aagaagggaa	agttgcccac	tgtaaatgaa	360
gatgatgagc	ttgtggccat	cattgcccgg	acagacctga	agaagaatcg	ggactaccca	420
ctagccttcc	aaagatgccc	aagaaaccag	cttgcttgat	ttgggcaagc	cattggggcac	480
ttcattgaag	gattgaccaa	ggttttangg	ccttggacct	ttggtttggc	cccaaggctt	540
tggtgttgga	attgtaaatg	gggttttttg	gacttttttt	nccangggg	aaaatttccc	600
tttttttenc	nanttccaat	tttgngatcc	aaagtnccct	tggccccggg	gccggggccc	660
tttcaaaaan	gggcc					675

<210> 845  
 <211> 620  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(620)  
 <223> n = A,T,C or G

<400> 845						
acagcctaag	acacaaggat	ctaggcgaag	tagccgcca	ataaaaaaac	gaagggcat	60
atcagattct	gagagtgaca	ttggtggctc	tgatgtgga	tttaagccag	acactaagga	120
ggaaggaaagc	agtgatgaaa	taagcagtgg	agtgggggat	agtgagagtg	aaggcctgaa	180
cagccctgcc	aaagttgctc	gaaagcggaa	gagaatgggtg	actggaaatg	gctctcttaa	240
aaggaaaaagc	tctaggaagg	aaacgccttc	agccaccaa	caagcaacta	gcatttcac	300
agaaaccaag	aatactttga	gagctttctc	tgccctcaa	aattctgaat	cccaagccca	360
cgtagtgga	ggtggtgatg	acagtagtcg	cctactgntt	ggtatcatga	aactttagaa	420
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ttgatgcctt	tnccctntnt	gggnccctga	ggatttcttc	aatctttgg	anccttggcc	540
nnnacccecn	ttangggcgn	aatccagccc	ttgngngncc	gttcttaggg	gatcncagct	600
tggnccaac	tttggggtan					620

<210> 846  
 <211> 617  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(617)  
 <223> n = A,T,C or G

<400> 846						
caggtacata	aagcagattc	aagggttaaa	ataaaaacag	aattttggag	tgtgggtcaaa	60
taagggtgcac	agattccaga	accctcagag	ggcctgctgg	ccctctccag	acattctgtg	120
tccgtggtgc	aggagctggg	cccgctcccta	acagctccgc	actggcttag	tgcagtgggtg	180
ctcacagttt	caggaaactac	taggtgaagt	gtctggctca	agtctgcca	gtgtcttcac	240
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tccatcctct	ttgcccgtc	ttccaaataa	ggcctgtga	tgccaacnaa	gggggcatgg	360
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acttgctgca	ncattnanga	catttaaggc	agaggggtca	tttaangnta	cttttncaaa	480
ttaatattn	gnnggatngg	cagttcttac	ctgnnactgg	tnnttatgg	ggnaattttt	540
taccangggg	ctgtctattt	taaatngctt	nggnattacn	ngtttngnac	cctcnaannn	600
ctngggaaac	ttntntnc					617

<210> 847  
 <211> 638  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(638)  
 <223> n = A,T,C or G

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&lt;211&gt; 636

&lt;212&gt; DNA

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&lt;220&gt;

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&lt;223&gt; n = A,T,C or G

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